

HEARING ON INVESTMENT IN CRITICAL TECHNOLOGIES THROUGH THE SMALL BUSINESS ADMINISTRATION'S EXISTING FINANCING PROGRAMS

Y 4. SM 1/2: S. HRG. 103-248

Hearing on Investment in Critical T... RING

BEFORE THE

COMMITTEE ON SMALL BUSINESS
UNITED STATES SENATE
ONE HUNDRED THIRD CONGRESS

FIRST SESSION

ON

HEARING ON INVESTMENT IN CRITICAL TECHNOLOGIES THROUGH THE
SMALL BUSINESS ADMINISTRATION'S EXISTING FINANCING PROGRAMS

JUNE 9, 1993



Printed for the Committee on Small Business

U.S. GOVERNMENT PRINTING OFFICE

71-763

WASHINGTON : 1993

For sale by the U.S. Government Printing Office
Superintendent of Documents, Congressional Sales Office, Washington, DC 20402

ISBN 0-16-041712-0

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HEARING ON INVESTMENT IN CRITICAL TECHNOLOGIES THROUGH THE SMALL BUSINESS ADMINISTRATION'S EXISTING FINANCING PROGRAMS

WEDNESDAY, JUNE 9, 1993

U.S. SENATE,
COMMITTEE ON SMALL BUSINESS,
Washington, DC.

The Committee met, pursuant to notice, at 10:37 a.m., in room SR-428A, Russell Senate Office Building, Hon. Dale Bumpers, Chairman of the Committee, presiding.

OPENING STATEMENT OF HON. DALE BUMPERS, A U.S. SENATOR FROM THE STATE OF ARKANSAS

The CHAIRMAN. Good morning. First, I want to apologize for my lateness in arriving here. It is just a classic case of what always happens here when you have two very important Committee assignments at the same time. It is not unusual, and if anything the situation grows worse.

In order to make up for a little lost time, I will insert my opening statement in the record, and we will go straight to our witnesses.

[The prepared statement of Senator Bumpers follows:]

PREPARED STATEMENT OF SENATOR DALE BUMPERS

The Small Business Committee today considers the nature and extent of small business investment in technologies which are critical to the Nation's future economic competitiveness. Included in our review will be financing of technology companies by the Small Business Administration and by Small Business Investment Companies licensed by SBA. The Committee is concerned about legislation recently reported by the Senate Commerce Committee, S. 4, which appears to overlap, if not duplicate, the existing SBIC program.

It goes without saying that the world economy at the end of the Twentieth Century is almost unimaginably different than that of even a half-century earlier. We must expect the pace of technological change to continue, and we in Congress must help foster the ability of American firms to compete in this rapidly changing world.

The cost and availability of capital is as critical for technology ventures as it is for small business generally. That issue is hardly new to this Committee, and it seems to be very much on the mind of President Clinton. For two years we held extensive hearings into the Small Business Investment Company program, which has produced some of America's most spectacular economic successes as well as few notable losses. These hearings, as well as assessments of the program done by outside experts, culminated last year in the passage of H.R. 5191, the Small Business Equity Enhancement Act of 1992, which was signed by President Bush on September 4, 1992, as Public Law 102-366.

That legislation created the basis for a new and improved SBIC program which allows the government to take, in effect, an equity position in individual SBICs through a new "Preferred" Security. Under this new Security, interest on money loaned to the SBIC will be suspended while the SBIC's clients companies mature. This kind of patient capital has been the desperate need of growth-oriented, entrepreneurial companies since the inception of the SBIC Act in 1958. In return for forbearance on debt service while investments mature, SBA will participate in any eventual profits of the SBIC.

This new SBIC program was the product of countless hours' work by the House Small Business Committee, this Committee, and members of the administration and industry. Evidently, our handiwork was so admired by some members or staff of other Congressional Committees that they decided to replicate the program in the Department of Commerce. The House companion bill to S. 4, drafted by the House Space, Science and Technology Committee, actually incorporates parts of our bill from last year by reference to the citation. It calls the new entities CTICs, Critical Technology Investment Companies.

It is said that imitation is the sincerest form of flattery, and both this Committee and SBA are flattered that the Commerce Committee and the House Science Committee chose one of our programs as a role model. Unhappily, however, this new "wannabe" program feeds from the same trough as existing small business programs, namely the Commerce, Justice and State Appropriations bill and, as a member of that subcommittee, I know that we haven't enough corn to go around for existing programs. SBAs largest loan program, Sec. 7(a) guaranteed bank loans, spent its last dollar and hasn't made a loan since April 28, with no relief in sight.

The new SBIC program will need substantial additional resources above baseline in 1994 to fulfill its legislated mandate and to meet an important economic need. Those resources are nowhere in sight. Hence, I have grave reservations about creating a similar, competing business-financing program at the Commerce Department, and particularly one that is not limited to small business.

We have a distinguished group of experts on business finance, not the least of which is our new SBA Administrator. Erskine Bowles brings to SBA an unprecedented depth of experience in the realm of business finance. He and those who follow will help educate us and, I hope, advise whether the new CTIC program is needed sufficiently to justify any overlap with the SBIC program.

The CHAIRMAN. I will simply say for the record that the real purpose of this hearing is to discuss the pros and cons of having essentially two SBIC programs, one in the Commerce Department and one at the SBA dealing with the same subject. It makes absolutely no sense to me. Since I first heard about it, I found it almost surrealistic that we were even contemplating such a thing. I am going to resist that with all the might I can.

I may not be successful, but it is the exemplification of what is wrong with the Government when you duplicate programs, create two bureaucracies to carry out the same functions, one experienced, with a 30 year history, and the other one totally new. As I say, it must makes no sense.

Our first witness this morning is our distinguished administrator of the Small Business Administration, whose already begun to acquit himself precisely the way I anticipated he would. Mr. Bowles, we are honored to have you with us this morning. Please proceed with your testimony.

**STATEMENT OF HON. ERSKINE B. BOWLES, ADMINISTRATOR,
SMALL BUSINESS ADMINISTRATION; ACCOMPANIED BY WAYNE
FOREN, DIRECTOR, INVESTMENT DIVISION, SMALL BUSINESS
ADMINISTRATION**

Mr. BOWLES. Thank you, Mr. Chairman. Mr. Chairman and members of the Committee, it is a pleasure for me to appear before you today to discuss the contribution SBA lending and investment programs have made to technology development. I would like to sum-

marize my testimony, if that is all right with you, Mr. Chairman, and ask that my written testimony be submitted for the record.

The CHAIRMAN. You will make permanent friends here by summarizing.

Mr. BOWLES. Thank you, sir.

Wayne Foren, who is director of the SBAs Investment Division which supervises our SBIC program is with me today also.

As you know, SBA's primary business loan programs are the 7(a) program and the 504 program, which are basically secured lending programs. These two programs, when adequately funded, account for 97 percent of our business lending and investment activities. Because these are debt programs and therefore do not provide the kind of patient capital that is normally associated with equity, the 7(a) program and the 504 program are not geared to financing seed and early stage technology firms. Patient capital usually comes in the form of either equity capital or debt capital with equity features. By that, I mean a company using this type of financing makes no interest or principal payments during its early years when its cash flow requirements are the greatest.

The SBA's SBIC program is our agency's primary vehicle for financing technology development and commercialization. The program was begun almost 35 years ago to provide risk capital to manufacturing and pioneering firms. Certainly, companies that develop and commercialize critical technology qualify as pioneering firms.

Under the SBIC program, the SBA licenses privately owned and managed venture capital firms whose sole purpose is to provide capital in the form of equity and long-term subordinated debt to small companies. These small companies need seed capital for startup and expansion capital to fund their growth, modernization, or expansion. It is significant to understand that the SBIC program is the only Federal Government program of its type financing venture capitalists.

Since 1958, SBICs have provided a total of \$11 billion of financial assistance to over 57,000 small businesses. Of the \$11 billion the venture capitalists have invested, 61 percent has gone to companies less than 3 years old.

The CHAIRMAN. Let me interrupt you. Say that again, now?

Mr. BOWLES. Of the \$11 billion that we have funded to venture capitalists, 61 percent of that—

The CHAIRMAN. 61 percent?

Mr. BOWLES. 61 percent has gone to companies less than 3 years old; 46 percent has gone to manufacturing companies, and 16 percent has been invested in technology. That percentage has been increasing over the last several years.

During the last 5 years, an average of \$100 million a year has been provided by SBICs to technology firms. We also note that about half of the 300 operating SBICs have technology companies in their portfolio. Clearly, technology investment is a broad-based activity within the SBIC program.

There are many success stories of technology firms that receive SBIC financing at critical stages in their development. Intel Corporation, for example, was financed by SBICs during its development stages. Cray Research and Apple Computer are two other well-

known technology firms that received significant SBIC financing during critical stages in their growth and development.

Today, these three companies alone, just these three companies, employ almost 45,000 people, they have revenues in excess of \$13.5 billion, and they pay \$763 million in taxes annually. Mr. Chairman, these three companies have paid over \$3 billion in taxes during their existence, which is more than the entire amount of financial assistance provided by the Government to all SBICs in the program's entire history—just these three companies.

Clearly, the economic benefit from these investments in terms of technology development, jobs, revenue, and taxes has been enormous. But these are simply a few of the better-known technology companies financed through the SBIC program. The May 24, 1993, issue of Business Week Magazine has a feature article called "Hot Growth Companies," a review of the 100 best small corporations.

In this article which reviews the 100 best small corporations in America it discloses that at least 10 were financed by SBICs, of which seven, or 70 percent, are technology companies. These seven companies were started between 1979 and 1984, and the SBICs provided their initial financing to these companies between 1983 and 1991. The total annual sales of these seven companies have increased 10 times, and their employment has increased four times since receiving their SBIC financing. These companies are simply further evidence of the SBIC program's strong support of the technology sector.

Mr. Chairman, financing technology is a high risk, high return business that should only be undertaken by management experienced in making such investments. Professional venture capitalists such as those funded by the SBA's SBIC program are paid to take carefully considered risks that they believe have a reasonable opportunity for superior returns. They must show above average return on these investments to justify the additional risk. They also clearly recognize that not every investment in every high tech company will be successful.

We believe, as does the venture capital industry, that the recent legislative changes to the SBIC program that were approved almost unanimously by the Congress last year will cause significant private capital to flow into the SBIC program and will result in greater use of SBA guarantee authority. These changes will mean more capital flowing into the SBIC program generally and into technology firms specifically.

At the present time there are several SBICs being formed that will focus on assisting technology firms. Based on expressions of interest, we could have 150 to 200 licensed applications for SBICs over the next 2 years. Assuming average private capital levels will be \$10 to \$15 million each, that could be \$1.5 to \$3 billion of new private capital flowing into the program over the next 2 years. With leverage of approximately two times, that could mean an additional \$3 to \$6 billion flowing into the market for a total of \$4.5 to \$9 billion of new capital flowing into venture capital over the next several years. And that's into venture capital in general and into technology companies specifically.

Mr. Chairman, clearly, without any legislative action, we believe increased amounts of financing will flow to technology firms

through the SBIC program beginning in fiscal year 1994. Creating a special program to provide venture capital for critical technology will only enhance this activity.

The administration shares your goal of assisting small business that are developing and commercializing technology without duplicating current programs or replacing the assistance provided by the private sector. As you may be aware, an article in the Wall Street Journal on June 1, 1993 concerning private sector assistance was headlined, "Venture Capital Investment Soars, Reversing a 4-Year Slide."

That article noted the significant increase in private venture capital in 1992 for technology businesses, and predicted that venture capital investment is likely to grow further in 1993. Other research suggests that significant gaps in funding may exist, particularly for early stage and seed capital situations.

The SBA plans to work closely with the Department of Commerce to better understand what assistance is available in the private sector and to determine what, if any, new Federal assistance is necessary for venture capital. I have already met with Secretary Brown to discuss ways in which our two agencies can work together in partnership to address a host of issues.

I note that both the House-passed legislation H.R. 820 as well as S. 4 as ordered reported by the Senate Commerce Committee, require the Department of Commerce to develop an operating plan for achieving the goal of assisting companies to develop technologies. I can assure you, Mr. Chairman, that based on my extensive discussions with Secretary Brown that I will be actively involved in the development of that plan.

Of course, any new assistance for technology companies has to be viewed along with other administration efforts to encourage private lending, lower interest rates, and improve the overall economy. We appreciate your support and the support of the members of the Committee in those efforts.

In conclusion, I should state that I believe it is essential that adequate patient capital be available domestically for development and commercialization of the critical technologies that will be the foundation for a 21st century economy. The United States must invest in these technologies if it is to be competitive in the global marketplace for the next century. Clearly, the SBA's SBIC program has been and will continue to be an effective vehicle to provide patient capital to venture capitalists who will in turn finance the startup, the growth, and the expansion of small and intermediate firms. This, of course, includes technology companies.

Mr. Chairman, this concludes my prepared remarks. I will be happy to answer any questions you may have.

[The prepared statement of Mr. Bowles follows:]

PREPARED STATEMENT OF ERSKINE B. BOWLES

Mr. Chairman and Members of the Committee: It is a pleasure to appear before you today to discuss the contribution the SBA finance programs have made to technology development.

As you know, SBA's primary business loan programs are the 7(a) loan program and the 504 development company loan program which are essentially secured lending programs. These two programs account for 97 percent of our business lending and investing programs. Because these are debt programs and therefore do not pro-

vide the kind of patient capital that is normally associated with equity, the 7(a) program and the 504 program are not geared to financing seed and early stage technology firms. Patient capital usually is either equity capital or debt capital with equity features. By that I mean a company using this type of financing makes no interest or principal payments during its early years, when its cash flow requirements are greatest.

A funding program primarily consisting of debt securities can be effectively utilized by technology firms during their later stages when they are generating sufficient cash flow to service debt; however, large amounts of debt capital are generally not appropriate for seed and early stage technology firms that are incurring losses and experiencing rapid growth and therefore significant working capital and capital expenditure needs.

The Small Business Investment Company (SBIC) program is the SBA's primary program for financing technology development. The program was created over 35 years ago to provide risk capital to manufacturing and "pioneering" firms. This initiative was based on a Federal Reserve study which concluded that these firms did not have adequate access to long term patient capital. Companies that develop and commercialize critical technology certainly qualify as pioneering firms.

Under the SBIC program, the SBA licenses privately owned and managed venture capital investment companies, whose sole purpose is to provide capital in the form of equity and long-term subordinated debt to small firms. These small companies need seed capital for start-up and expansion capital to fund their growth, modernization or expansion. The SBA provides these licensed venture capitalists with financial assistance usually by guaranteeing their securities which are funded in the public markets. In some cases, the SBA purchases the licensee's securities directly. It is significant to understand that the SBIC program is the only Federal Government program of its type financing venture capitalists.

CRITICAL TECHNOLOGY

The SBIC program uses a high technology definition based on categories of industries and the critical technology definition is based on products and processes.

Mr. Chairman, you referenced critical technologies as those identified pursuant to section 603(d) of the National Science and Technology Policy, Organization and Priorities Act of 1976, as amended. This act established a national critical technology panel to identify critical technologies. The panel has identified critical technologies based on the products and processes that are being developed. Unfortunately, the SBA's information is summarized according to the Office of Management and Budget definition of industries, rather than products and processes, and we do not currently have sufficient information in our existing data bases to recompile on a timely basis the data you requested based on products and processes.

Our statistics are based on a high technology industry definition that was established by the Office of Technology assessment in 1984 and it includes small concerns that are classified within 23 specific three digit standard industrial classification (SIC) codes. Although this definition is different than the product and process related critical technology definition referenced in S. 4, we believe the SBIC program has made a major contribution in the development and commercialization of critical technology. Examples would include:

- (1) Intel's development of the computer chip
- (2) Cray Research
- (3) Apple Computer
- (4) Compaq Computer
- (5) Symbol Technologies, Inc.
- (6) Data Race, Inc.
- (7) Citation Computer Systems
- (8) VMARK Software
- (9) Xyplex, Inc.
- (10) American Medical Electronics

The SBA office of Small Business Innovation, Research and Technology (SBIR) has established a system of classification for program purposes that sets forth 122 technology areas. Most of these areas fit the 22 critical technology product and process categories. We are now in the process of investigating the feasibility of accumulating SBIC program statistics for technology using the classification system established by our SBIC office. If adopted, this system should produce information the kinds of critical technologies the SBA is financed through our SBIC program.

An alternative tracking system could link SBICs to critical technologies. For example, "ceramics" is considered to be a critical technology material. Standard indus-

try classifications making up ceramics would include the manufacturing industries of ceramic fiber (3299); ceramic glazed brick, clay (3251); ceramic tile, floor and wall (3253); and the wholesale industry of ceramic wall and floor tile, wholesale (5032).

SBIC PROGRAM PERFORMANCE

Since 1958, SBICs managed by venture capitalists have provided a total of \$11 billion of financial assistance to over 57,000 small businesses. While the program has not been limited to manufacturing and pioneering firms, they have received a significant portion of this financing. Of the \$11 billion the venture capitalists have invested, 61 percent has gone to companies less than 3 years old, 46 percent has gone to the manufacturing sector, and 16 percent has been invested in technology.

It is noted "pioneering firms" are not limited to technology firms. Probably the best example of such a firm is Federal Express. Readily recognizable success stories would be Gymboree Corp., Staples, Inc., and the Wholesale Club.

According to Venture Economics, the leading venture industry information source, since 1958, approximately \$1.6 billion of SBIC financing cumulatively has been used to finance advanced technologies in their early years of development. These funds have leveraged an additional \$7.1 billion from other private investment sources.

During the last 5 years, an average of \$100 million a year has been provided by SBIC's to technology firms. We also note that over half of the 300 operating SBICs have technology firms in their portfolio. Therefore, this a broad based activity within the program.

There are many success stories of technology firms that received SBIC financing at critical stages in their development. Intel Corporation, for example, was financed by SBICs during its development stage. As a result, Intel is a leading manufacturer of microprocessors. Cray Research and Apple Computer are two other well known technology firms that received significant SBIC financing during critical stages in their growth and development.

Today, these three companies employ 44,800 people, have total annual revenue exceeding \$13.5 billion, and pay \$763 million in taxes annually. Their annual taxes alone exceed the entire cost to the government of the SBIC program. They have paid over \$3 billion in taxes during their existence which is more than the entire amount of financial assistance provided by the government to all SBICs in the program's history. Clearly, the economic benefit from these investments in terms of technology development, jobs, revenue and taxes has been enormous.

The May 24, 1993, issue of Business Week magazine has a feature article called "hot growth companies". A review of "the 100 best small corporations" disclosed that at least 10 were financed by SBICs and 7 of these 10 are technology companies. These 7 companies were started between 1979 and 1984 and the SBICs provided financing to these companies between 1983 and 1991. The total annual sales for these 7 companies at the time of their SBIC financing were \$25.9 million and the aggregate annual sales for these companies has increased almost ten fold since that time to \$232.6 million. The aggregate employment of these 7 companies when financed was 252 and the current employment is 1,029. Finally, the income taxes paid in the last fiscal year by these 7 companies was \$10 million, while the total SBIC investment in these companies was only \$6.6 million.

Mr. Chairman, financing technology is a high risk/high return business that should only be undertaken by management teams experienced in making much investments. Professional venture capitalists are paid to take carefully considered risks that they believe have a reasonable opportunity for superior returns. They must show above average returns on their investments to justify the additional risk. They clearly recognize that not every investment they make will be successful.

THE RESTRUCTURED SBIC PROGRAM WILL INCREASE VENTURE CAPITAL AVAILABLE THROUGH THE SBIC PROGRAM AND FINANCING TO TECHNOLOGY FIRMS

As explained above, SBICs have successfully funded technology firms since the early 1960's. However, there have been structural problems in the program which limited its effectiveness.

We believe, as does the venture capital industry, that the recent legislative changes to the SBIC program that were approved almost unanimously by the Congress last year will cause significantly more private capital to flow into the SBIC program and will result in far greater use of the SBA guarantee authority. These changes will mean more funds flowing into the SBIC program generally and into technology firms specifically.

Based on expressions of interest, we could have 150-200 license applications for SBICs over the next 2 years. Assuming average private capital levels will be \$10 to \$15 million, that could be \$1.5 to \$3.0 billion of new private capital flowing into the program over the next 2 years.

At the present time, there are several SBICs being formed that will focus on assisting technology firms. As an example, a proposed new SBIC, Northeast Venture Partners, is being formed to serve the northeast corridor and the middle atlantic area. It will be managed by zero stage capital, a well established venture capital firm which has specialized in early stage technology investments. At present, they are managing four separate venture partnerships with total private capital of \$40 million. Their goal is to raise an additional \$35 million primarily from pension funds to capitalize this new SBIC that will provide seed and expansion capital to firms involved in the following technology areas: computer hardware and software, biotechnology, biomedical engineering, energy and environmental technology, telecommunications, and networking. This SBIC will be associated with the Research Park at Penn State University and it will work closely with John Preston at the M.I.T. Technology Transfer Center.

As you can see, Mr. Chairman, we believe that without any legislative action, increased amounts of financing will flow to technology firms through the SBIC program beginning in FY 1994. Creating a special program to provide venture capital for critical technology will only enhance this activity.

SUMMARY OF THE CHANGES THAT WILL ENCOURAGE FINANCING TECHNOLOGY

The joint effort by the Administration and the Congress to restructure the SBIC program is almost complete. These legislatively approved changes to the SBIC program will greatly expand the number of venture capitalists and institutional investors who want to form and fund an SBIC which will in turn finance start up and growth oriented small businesses. The most significant changes to the SBIC program contained in this new legislation are as follows:

- *Expanded definition of private capital.* Both private and public pension funds can now invest in an SBIC as well as State and local government. Previously, only private pension funds could invest. Commitments from institutional investors will also be recognized as private capital.
- *New security for venture capital SBICs.* The new participating security will allow SBICs to match their sources and uses of funds. They will use the proceeds from the SBA guaranteed participating securities to make equity investments in small businesses. SBICs don't make payments on their participating securities until their investments in these small companies mature and are harvested.
- The participating security enables SBICs to provide the kind of *patient equity capital* that small businesses need to grow and expand. Previously, SBICs generally had to provide capital to small firms in the form of current pay debt security. The requirement to pay current interest placed a strain on the cash flow of these small businesses. Small businesses generally have cash flow problems in their early years either due to the fact that they are producing losses or the fact that they are growing so rapidly they are consuming cash.
- This new participating security will attract a significant amount of *new capital from institutional investors* to the venture capital business. Previously, pension funds and other institutional investors did not invest in SBICs because their investment in debt securities would cause the institution to incur a tax liability for unrelated business taxable income (UBTI).
- *Increase the maximum amount of government-backed funding.* The amount of government backed leverage one SBIC, or several SBICs operating under common control, can obtain has been increased from \$35 million to \$90 million.

CAPITAL GAP FOR CRITICAL TECHNOLOGY FIRMS

Accurately measuring the unmet demand for capital by early, seed-stage critical technology firms is difficult. It also must be stressed that the venture capital community will not fund every single new critical technology firm that seeks financing regardless of the amount of funds available to this sector. In some cases the perceived risk of investing in these firms is simply deemed by the venture capitalists to be too high in relation to the potential reward. This is often the case when the proposed projects are deemed not to be commercially viable or the management team is perceived not to have the ability to take a good idea and turn it into a successful venture. Notwithstanding these cautionary comments, I believe a significant capital gap does exist for small seed and early stage technology firms.

You have asked that I present my views concerning the size of a company, measured in net worth, above which venture capital and other financing for technology development are available from the existing banking and securities markets.

This is a very difficult question to address. The ability to raise funds for high technology companies whether from banks or securities markets depends less on the size of the company and much more on the perceived risk of the investment and the related potential return expectations. As an example, companies with almost no assets but a great idea and an experienced management team have been able to access the public securities markets based on the perceived strength of "their story" and the potential return. In general, however, high tech, start up ventures with no operating history are perceived to be far too risky for banks to finance. These companies generally must turn to the venture capital industry for their financing. The more capital intensive the industry is, the greater the need for funds from the venture capitalist. Unfortunately over the last 5 years, the annual amount of venture capital being formed in the United States decreased from \$4 billion to \$1 billion. In 1992, industry sources believed that there was an increase in venture capital formation. Our hope is that the restructured SBIC program will help to dramatically reverse this downward trend in the funds flowing to the venture capital industry for investment in growth-oriented small companies.

For a more definitive answer, extensive research would need to be performed and information would need to be obtained from various commercial banks, investment banks and venture firms.

You have also asked that I present my views concerning the extent to which joint ventures of small firms and larger firms are able to receive financing, including venture capital, from existing sources for technology development.

In a joint venture, each party brings something to the table. Usually, the small firm has the people with the creative talent and expertise. The larger firm usually provides financial support and other capabilities including a delivery system that the small firm has not developed. These relationships often offer an improved opportunity for success of the venture and therefore greatly improve access to third party capital. As in anything else, depending on the level of commitment by the larger firm, its involvement in the venture may cause the joint venture to have additional access to capital to develop technology that it would not have otherwise. This additional access to capital could come from the larger firm itself or from venture capitalists who perceive greater opportunity for the new company due to the larger firm's participation.

These joint venture relationships should be fostered to achieve a public purpose: domestic development of critical technology. To stimulate such a public purpose it may be appropriate for the government to provide some assistance to such joint ventures.

ASSISTANCE FOR TECHNOLOGY DEVELOPMENT

The administration shares your goal of assisting small businesses that are developing and commercializing technologies without duplicating current programs or replacing the assistance provided by the private sector.

As you may be aware, an article in the Wall Street Journal of June 1, 1993, concerning private sector assistance was headlined "venture capital investment soars, reversing 4-year slide." That article noted the significant increase in private venture capital in 1992 for "technology businesses" and predicted that venture capital investment is likely to grow further in 1993. Other research suggests that gaps may exist, particularly for early stage and seed capital.

We plan to work closely with the Department of Commerce to better understand what assistance is available in the private sector and to determine what, if any, new federal assistance is necessary. I have already met with Secretary Brown to discuss ways in which our agencies can work together to address a host of issues.

I note that both the House-passed competitiveness legislation, H.R. 820, and S. 4, as ordered reported by the Senate Commerce Committee require the Department of Commerce to develop an operating plan for achieving the goal of assisting companies to develop technologies. I can assure you, Mr. Chairman, that I will be actively involved in the development of that plan.

Of course, any new assistance for technology companies has to be viewed along with other administration efforts to encourage private lending, lower interest rates, and improve the overall economy. We appreciate your support and the support of the Members of this Committee in those efforts.

CONCLUSION

It is essential that adequate patient capital be available domestically for development and commercialization of the critical technologies that will be the foundation for a 21st century economy. The United States must invest in these technologies if it is to be competitive in the global marketplace of the next century.

Clearly, the SBA's SBIC program has been, and will continue to be, an effective vehicle to provide patient capital to venture capitalists who will in turn finance the start up, growth, and expansion of small and intermediate firms. This includes technology firms.

Mr. Chairman, this concludes my prepared remarks. I will be happy to answer any questions you may have.

The CHAIRMAN. Mr. Bowles, of course, to me that is an excellent statement because it precisely sums up my own view of this entire problem. And you know, at first I thought well, maybe we can accommodate S. 4 by saying that we will add some legislation saying it is the sense of the Congress that SBICs should, all things being equal, give higher consideration to critical technology applications, as opposed to ordinary small business.

But I am not willing to do that. After all, SBICs are there not to favor one type of business or another. But certainly, when they get applications that are meritorious and they can take an equity position or loan money to a small high tech startup, they do it.

Now, one of the things that I would like for you to supply to me and the Committee, if you would be kind enough to send it out to individual Members of this Committee, is the current 10-year history of the number of high tech loans—or technology loans, they do not have to be high tech or biotech—a list of the loans that have been made by SBICs to technology companies over the past 10 years in both numbers and in dollars.

What I want to do is to see what the trend is. Are SBICs investing more in technology companies or less? This is one of the points I think that was made by somebody in the Commerce Committee, that venture capital for high tech companies has been drying up. Incidentally, that is the whole genesis of the Bumpers capital gains proposal, is to reverse that very trend and attract money especially for biotech and high tech operations. They are very expensive to start up.

But anyway, having said that, I cannot think of a question I can ask you because you have made the speech that I will make on the floor of the Senate when we attempt to remove this provision of S. 4.

Senator LAUTENBERG. Verbatim?

The CHAIRMAN. I may just read the statement. With the normal gestures.

But I would like to ask you this, Mr. Bowles, at what size, measured in net worth, are companies no longer candidates for venture capital investments?

Mr. BOWLES. Let me try to address that in real world terms, having spent a good portion of my career in this very industry.

Mr. Chairman, size in terms of net worth generally is not the critical component of determining whether or not a company receives financing. I have seen, as you have also, any number of companies that had no more than a dream, but a very strong management team that the market believed could implement that dream and turn it into a reality.

I have seen companies with a dream and a good story be able to access the public markets for literally hundreds of millions of dollars, just based on that dream and that dream alone, with no track record and no history, it is a brand new company.

At the same time, I should state without any hesitation that generally early stage high tech startup companies do not find the banks of this country willing to make loans to them because of the perceived risk of that investment. So a startup generally does not find funds available from the banking community. In general, they will have to turn to the venture capital community for that financing.

Clearly, the more capital intensive this company is, and that can either be working capital intensive for working capital to finance for future growth or working capital to finance early losses, or capital intensive because of the capital expenditure needs of a company that it will have to make to be competitive in a global market place, that really determines the amount and size of the funding they need in order to be competitive in the market place.

So generally, the size component does not so much function based on the assets of a company or the need for funds or the availability of financing, but more on the strength of the story and the management team and the industry within which the company is going to compete.

The CHAIRMAN. In short, what effect do you think the new participating security is going to have on investments in critical technologies in the future? Is it going to increase it or not?

Mr. BOWLES. I think clearly, and again we have a 35-year history to work from, but the new legislation which the Congress approved last year is truly revolutionary. I think it is the most important piece of legislation that I can imagine being passed by the Congress as it affects the venture capital industry. It is very far reaching legislation. I just signed the regulations yesterday and sent them over to OMB for approval.

I believe that you will see no less than 150 to 200 SBICs being formed, based on the early indications of interest we have.

The CHAIRMAN. 200?

Mr. BOWLES. 150 to 200. There are now approximately 325, so that shows you just in the number. Two, I believe you will see the size of these venture capital firms being much larger than the ones being formed before. I think you will see private equity capital in the range of \$10 to \$15 million going into each one of these. That means \$1.5 to \$3 billion worth of new private capital going into these.

One of the reasons why I think you will see larger pools being formed is that part of the legislation allows for pension funds and other types of institutional investors to invest in it. Because of the way the legislation is crafted, the pension funds no longer have the unrelated business taxable income problem that they previously had in investing in such funds.

But if you have \$1.5 to \$3 billion worth of new private capital going into the SBICs, and since most of the nonbank-related SBICs employ leverage as part of their program—and that leverage is about two to one—I think you could see between \$3 to \$6 billion worth of new debt capital there. So that would be a total of about

\$4.5 to \$9 billion of new capital flowing into the venture marketplace over the next several years.

That would be extraordinary. And if, in fact, that did happen, and if in fact just the same percentages held forward that have held forward in the past, approximately 20 percent of that would go to what we call high-tech firms. How much of that would fall within the critical technologies we do not have the data to tell you. But I would assume a good portion of it because the critical technologies are the technologies of the future.

The CHAIRMAN. Incidentally, as you testified there is an article in the June 1 Wall Street Journal where it says the venture capital funds investment in small companies nearly doubled in 1992.

Mr. BOWLES. Yes, sir, I did.

The CHAIRMAN. That flies in the face of the argument made in the Commerce Committee the other day.

Mr. BOWLES. The trend line has been down over a number of years for capital flowing into venture capital. We did see a blip up last year. We hope to see a blip up this year. But the trend line clearly was down before that.

The CHAIRMAN. Senator Pressler?

**STATEMENT OF HON. LARRY PRESSLER, A U.S. SENATOR FROM
THE STATE OF SOUTH DAKOTA**

Senator PRESSLER. Thank you, Mr. Chairman. I apologize for being late. I have been over in the Foreign Relations Committee where I had some legislation I had to take care of.

Let me commend Chairman Bumpers and SBA Administrator Bowles for their efforts on this issue. I have found this to be a very difficult debate. I am amazed that we are wrestling with it because logic seems to be so much on the side of not creating duplicate programs and also keeping the government focused on helping small businesses.

I asked Commerce Secretary Ron Brown about this during a hearing of the Commerce Committee earlier this year. At that time he concurred with me that there was no point in creating another bureaucracy. This bill, S. 4, came to the Commerce Committee for mark-up and Senator Hollings claimed that he had the votes on his side to block attempts to move the CTIC program to the SBA. We had various people who would have made speeches, but would have voted against the program's move to SBA in an effort to pass the bill out of Committee and get it to the floor where the whole Senate could act on it. Perhaps we should have fought it out there. However, we did not think we had the votes in the Committee because of the overwhelming pressure due to the fact that Senator Hollings wanted to report the bill out.

Now, I am concerned about this issue for a number of reasons. The Wall Street Journal has another article today which maybe has been referred to already which pretty well summarizes the wrestling around that we are going through here. In addition, I cannot understand why the administration does not have a clear position on this.

But it appears to me that we are building a duplicative bureaucracy in Commerce very similar to one already in existence at SBA.

Also, we are lifting the cap on the size of recipient companies, allowing a Fortune 500 company to qualify for Government financing just as a small company can under the current SBA program.

Now, you probably covered these issues already and I apologize for being late in getting here, but have I stated this correctly?

Mr. BOWLES. Senator, I should state that I believe the article in today's Wall Street Journal overstates the disagreement, if any, within the administration. I have met with Secretary Brown as recently as yesterday for over an hour. I am confident that over a reasonably short period of time the Secretary and I can agree on an appropriate resolution of the administration's position to move forward.

Senator PRESSLER. Please remind him that he told Senator Pressler during a Commerce Committee hearing that the program should remain in SBA.

Mr. BOWLES. Yes, sir.

Senator PRESSLER. You might be interested in that, Mr. Chairman.

The CHAIRMAN. Senator Pressler, if I may at this point inject this about the Wall Street Journal article this morning. In the second paragraph it says, "Officials at both agencies want to head up a new government venture capital program for small and mid-sized high technology companies that Congress may create as early as this month." That is not true. S. 4 has no limitation on the size of a company.

It suggests that they concentrate on companies with a \$50 million or less net worth. And I might say at this point a company with a \$50 million net worth has no business seeking government largess. They ought to be able to go to any bank and get a loan. But there is no limit. There is absolutely nothing to keep Intel from getting a business loan under this. They would not normally, of course. But there is no limitation on the size.

SBA is just now increasing the size standard in SBICs from \$6 to \$18 million. And I think that is a very wise move, but I think that is about the maximum we ought to go to right now. That is one of the really fatal flaws in S. 4, that there is no limit. Anybody, I do not care who it is, even Frank Lautenberg's company could borrow money from it.

[Laughter.]

Senator PRESSLER. Mr. Chairman, you have been a champion of this and you did a great deal of work lining up votes in the Commerce Committee, although Senator Hollings claimed he had them reduced to speeches. So we will find out on the floor. But I want to commend you for your leadership on this.

Now, Mr. Bowles, in this same Wall Street Journal article you are quoted as saying you feel very strongly the program should be at SBA. Now, that is what you are saying to the Secretary of Commerce? Will you take this up with President Clinton, if necessary?

Mr. BOWLES. Senator, I have no question in my mind that Secretary Brown and I, after our meeting yesterday, will be able to work out a position that the Congress will find to be a good one. I think it will be a position that makes sense. I think there are lots of grounds of mutual cooperation. I think we have a very good relationship. I think that article grossly overstates the differences in

the opinions at this point in time, and I believe we will be able to work this out with little or no problem.

Senator PRESSLER. Good. Now, Senator Rockefeller says he wants to make the Department of Commerce like it was back when Herbert Hoover was Secretary of Commerce. I do not know what it was like then, and, very frankly I am having trouble figuring this whole thing out. I do not know why we are fighting about this because it seems to me that everything works well under current programs. We have a bureaucracy set up in the SBA to do this, and we limit the size of the companies that are involved. All the logic is on the side of the status quo. What can we, as Senators, do? What is our next step?

Mr. BOWLES. Having only been in Washington for about a month, I would not even begin to advise you what to do.

[Laughter.]

Senator PRESSLER. I found this whole fight kind of frustrating because it seems the logic is just so overwhelming. I have a number of questions here. I think some of them have been asked.

As you are aware, in the Commerce Committee we have been debating this creation of the Critical Technology Investment Company program. At the markup of S. 4, Senator Rockefeller made a number of comments as to why he believes the SBA should not handle a program for CTICs. I would like to hear your response to these points.

Do SBICs provide patient investment capital; that is, early stage financing for long-term projects? His argument is that it takes patient investment capital, and somehow that would be less available in SBA. I cannot understand that.

Mr. BOWLES. That is clearly not the case, Senator. If you look at the new legislation that you all approved almost unanimously last year, it was designed to provide patient capital. And in fact, the CTIC program is a mirror image of that program, almost. So it is almost a duplicate of patient capital.

I do think patient capital is surely what is needed for venture capital.

Senator PRESSLER. Now, regarding the proposed change in the size standards for SBA from \$6 million to \$18 million in net worth, would the new standards allow most companies that could not get financing for a promising idea somewhere else obtain help from the SBA? In other words, are there many companies out there that are larger than \$18 million in net worth but not large enough to obtain capital in non-governmental markets?

Mr. BOWLES. Senator, I am very pleased to be supportive, and the new regulations that we sent over to OMB this week include this, of raising the size standards in the SBIC program from \$2 million to \$6 million in average income, net income, and from \$6 million to \$18 million in average net worth. The reason I am supportive of that is I do believe that historically a number of small businesses have not been able to arrange capital for their second and third tier financing, which they need as they go through critical stages of growth. Increasing the size standards in this amount will allow us to meet that need. So I am very pleased to be supportive of raising it to that level.

Senator PRESSLER. Are there any models in Japan, Germany, or other foreign countries that would help make the case that this program should be kept at SBA or that would make the argument that it should be moved to Commerce?

Mr. BOWLES. Maybe Mr. Foren can speak to that. I simply am unaware of any.

Mr. FOREN. Whether or not it should be at SBA or Commerce I do not know, but there is a very small SBIC program in Japan that I am aware of. I am not aware of any comparable program in Europe.

Senator PRESSLER. I know the SBA has put in several years of work to reform the SBIC industry. Where do the final regulations stand right now, and when will they be issued?

Mr. BOWLES. Senator, you are correct. A lot of long, hard work has gone into restructuring the SBIC program. And again, I think the Senate and the House has a lot to be proud of in the new legislation because I think it does create a security that does provide patient capital to the venture capital industry. But it is a long and difficult process to go through.

It was begun in July 1991, and just yesterday I signed the regulations to go over to the OMB for approval. So as you can see, it is a long process. We would expect that those regulations would be approved sometime between as early as 120 to a maximum of 180 days from now.

Senator PRESSLER. One final question, and then I shall submit the rest of my questions for the record. One bill I am familiar with through my work on the Judiciary Committee and which the President is about to sign into law is bipartisan legislation that will amend and clarify the National Cooperative Research Act of 1984 and encourage more joint ventures for the production of advanced technology products. It passed the Senate by unanimous consent and with the President's full support. Will that piece of legislation affect SBA's programs?

Mr. BOWLES. I am in favor of joint ventures of small firms and larger firms being able to access the financing that we would offer through the SBIC program, and let me tell you why. Generally, the small firm would bring to the table the creative idea, perhaps even a patent, and also some people who have some real expertise in a particular industry.

What they often lack is the management strength, a delivery system, marketing expertise, and financial expertise. And often times a joint venture partner, a larger firm, can bring that to the table and form a new joint venture company, a small business that is a joint venture between a group of creative people with an idea and a larger company that brings other strengths to the table including capital.

I would like to see in the future such joint ventures be able to access the SBIC program through the venture capital firms if, in fact, the venture capitalists who are experienced in funding small firms believed that that joint venture was worthy of funding.

Senator PRESSLER. Finally, do you see any evidence that big companies would get more of the government's high tech financing assistance if S. 4 were enacted as currently written? Do you see this shift from SBA to Commerce as a way of getting a bigger piece of

the federal pie for big business? Is that what is really going on here?

Mr. BOWLES. Senator, I am the little company man. We are spending all of our time working with small companies, trying to make sure that small companies have the opportunity to compete in the marketplace, and so I have not spent hardly any time talking with larger companies. My entire focus has been on small business.

Senator PRESSLER. Well, all the logic seems to point in the direction of keeping this program focused on small business—keeping it limited in size. I am just surprised by the desire to create a competing program over at Commerce that would create a duplicate bureaucracy and place no limit on the size of businesses that would seek help. I think the result will be make a lot less money available to small companies and small businesses, and I think it is the big companies trying to take the program over.

Mr. BOWLES. Again, Senator, I had a very productive meeting yesterday with Secretary Brown and I am confident that the administration can arrive at a position that will be acceptable to the Congress.

Senator PRESSLER. I hope it is not a watered down proposal that just costs more money and tries to do a little here and a little there. That would be just as bad. We should just decide, I think, what we are going to do.

Thank you very much, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Pressler.

Senator Lautenberg.

STATEMENT OF HON. FRANK LAUTENBERG, A U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator LAUTENBERG. Thank you very much, Mr. Chairman. I wonder if we put a referendum before the American people whether they would not get really excited about creating another bureaucracy. I bet it would win overwhelmingly.

[Laughter.]

Senator LAUTENBERG. The last thing we ought to be doing is fighting about jurisdiction. The Small Business Administration has a lot of experience, a lot of trained people. If there is something wrong in the way things are being run in the Small Business Administration, that ought to be reviewed. And everyone who is a member of the body has a right to ask questions.

You are holding hearings on a fairly regular basis, Mr. Chairman to examine specific programs. So I fail to understand why it is now that if there is a new product being created, why we have to worry about where it rests. It ought to rest right here.

I think Senator Pressler said something significant in terms of identifying the small business assistance part of the program as the critical program, because, Mr. Chairman, we are talking about sexy things when we talk about technology, biotechnology, new communications systems. But this country is starving for business development in many, many areas. Manufacturing probably more—with a more desperate need than any other.

So here is an agency that has training in dealing with small business, and I think the focus ought to be kept on the small business side of things. The Chairman was kind of joshing before. He talked about my old company, ADP. And ADP today is a company doing over \$2 billion that I started with two other fellows on \$5,000 worth of borrowed equipment because one of the partners had put up the money while others of us had some ideas.

Well, it took a lot of time and a lot of technological development. But I think that, as Mr. Bowles said, you find a lot more interest in these kinds of ventures by people who are willing to speculate. Speculate is an appropriate term of business art. You want to take the risk and for what could be a significant reward.

So I think we have to be very careful in the design of programs that we have out of SBA and the SBICs to try to make sure that this capital is appropriately used. And I would ask you, Mr. Bowles, are there any rules that define the way a borrower or a company operates with that make it eligible or ineligible for support from a government-guaranteed SBIC?

Are there any rules against dividend payments before the debt is paid off? Are there any rules about salaries? Are there any rules about the kind of real estate, the kind of trappings that go into an office or a facility location?

Is there anything that we require by way of a commitment along the areas I just mentioned?

Mr. BOWLES. 99 percent of the rules that we have, and Wayne, I am sure you will correct me if I am wrong, but at least the ones that I have focused on deal not with the company that the venture capitalists invest in but with the venture capitalists themselves. It has been my experience in my business dealings that if there are 100 reasons that make a venture capital firm a success then numbers 1 through 99 are a strong, proven, effective management team.

Without that, experienced venture capitalists who understand the risk-reward scenario, who are able to look at a dream and decide whether it is worthy of financing, to make a judgment about whether or not that management team is worthy of financing, of backing, that is the most critical aspect, that management team.

We have any number of rules and regulations within the new SBIC language that protect the Government's investment and give the government truly a priority return on their investment.

Senator LAUTENBERG. How is there equity that—I am told here that there are fairly strict limits on SBIC overhead in compensation. Is that within the SBICs themselves or was that within the borrower or the company in which the investment is made?

Mr. BOWLES. Within the SBIC.

Senator LAUTENBERG. Well, we ought to be concerned about that, but I also am concerned about the fact that the government is guaranteeing in lots of cases that the taxpayer funds are being dealt with appropriately. Does SBA ever get equity in these SBICs? Are we an equity partner?

Mr. BOWLES. In the new SBIC program which was approved last year and which really did revolutionize the industry, we do get a profit participation in the security.

Senator LAUTENBERG. Because I am—well, I am excited about business and return and things of that nature. I do get concerned about the government having a profit stake.

One of the things that I had hoped for as we review our student loan program, for instance, is that we gear this kind of more to income and not schedule and say hey, if you have a decent enough income, pay the whole thing back.

Mr. BOWLES. And that is what you have done in this new legislation. As you know from your experiences at ADP, in your early years, you truly are starved for capital, and the last thing you need is—

Senator LAUTENBERG. No, we were starved for labor. What we were starved for was we had to go to work everyday, some days 12, 18 hours, typically 6 to 7 days a week. And the one thing that I find different, and I might be a little bit out of phase with things, was I thought that hard work was an essential ingredient, and that we couldn't just substitute capital. I find lots of people that I know, business people, venture capitalists, are able—will sit down, listen to an idea, and say yeah, let us throw an X or a Y amount in here. We have got a shot to really make this pretty big.

If you look at Apple, I am surprised. Apple was an SBIC borrower, and I think you said Cray, if I am not mistaken.

Mr. BOWLES. Yes, sir.

Senator LAUTENBERG. What kind of sums could these guys have been borrowing. I mean, Cray was one kind of a program. Apple is another. Then there are service companies. There are all different kinds of capital requirements. My company hardly needed any capital. We needed to go to work everyday.

Mr. BOWLES. Certainly, some businesses are labor intensive, but again, you needed capital to pay for that labor, and you generated that through generating revenues on your programs. And ADP is a great success story for sure. But companies like Capital, like Cray, like Compaq, needed funds. They needed capital in their early years when they were developing, when they were just ideas. The SBIC program was there to provide that seed capital as many small, growing, struggling companies need.

Senator LAUTENBERG. What kind of sums are we talking about that these folks?

Ms. CLOHERTY. A few million dollars. It was in the form of equity, and it amounted in the aggregate from the SBIC.

Senator LAUTENBERG. So that SBIC wound up with the equity, correct?

Mr. BOWLES. Right, but the SBICs invested equity in the equity of those companies.

Ms. CLOHERTY. They put small amounts to work on the program.

The CHAIRMAN. Let the record show this is Pat Cloherty that is speaking.

Senator LAUTENBERG. I am willing to take it from an unidentified coconspirator.

[Laughter.]

Mr. BOWLES. Pat Cloherty also headed the commission that rewrote the rules and regulations that we submitted to OMB yesterday.

Senator LAUTENBERG. And any gains that were made by the SBICs, I assume, were immediately—and let me use an unpleasant word—attached to the government guarantees to reduce our exposure or to get any loans paid back that were made to the SBIC so the funds would be available.

Ms. CLOHERTY. It is not an attachment, deal by deal.

Mr. BOWLES. As the companies that the SBICs invest in make funds, those funds come back to the SBIC and they use those funds to repay the government for borrowings.

Senator LAUTENBERG. Right, but Pat just said something that kind of went by quickly, and that was the proceeds from those investments were not used to reduce the guarantee overall that the SBIC received from the government.

Ms. CLOHERTY. I am sorry to interrupt.

The CHAIRMAN. Pat, let me suggest you have a moment coming in just a minute and we will get into this.

Mr. Foren, did you wish to elaborate?

Mr. FOREN. Yes, Senator. If I could, I would like to address that.

Until the new security was enacted and until it is employed SBICs issued debentures that we guaranteed, and those debentures carried semiannual interest payments and then principal payments at the end of term. They were bonds.

The SBICs sold their investment. They had the choice of making distributions to their investors, they had the choice of reinvesting in other small business concerns, they had the obligation of meeting the interest and principal payments on those debentures that they issued that we guaranteed.

This required them to make cash flow payments periodically. The new securities laws, SBICs with SBA's guarantee to provide patient capital to small business concerns, they do not have the current obligation to the government, so they can be patient. They can put their money into equity deals.

But the way the new security has been structured contemplates that the SBICs will take their capital in our leverage, make one round in investments in small business concerns, manage those investments and when they harvest or sell those securities, they are required to make distributions.

We get our piece first on the prioritized payment, which is comparable to the dividend that would be due in the participating security and then there are other rules relative to distribution. You can kind of use the idea of funds in, funds out.

So as the investments are sold, the fund is collapsed. We get our money back. Investors get their money back. It is—

Senator LAUTENBERG. On the same time schedule?

Mr. FOREN. Absolutely. It is a more rational, practical program and it does not leave the government with an empty bag.

Our concern when we structured the legislation about a year ago was that when distributions occurred, there be routable distributions to the government the same way that the investors got their money back.

We did not want SBICs making mid-term distributions and then for there to be left in the portfolio questionable securities for the government to salvage years down the road.

Senator LAUTENBERG. How about the reverse of that?

Senator BENNETT. Will the Senator yield?

Senator LAUTENBERG. Sure.

Senator BENNETT. I have not heard—maybe I was distracted—an answer to your earlier question about limitations on salaries and other perks. I know in the business that I had, when we went to a bank we had to pledge that the principals of the business would not, under any circumstances, pay themselves above a certain salary or make any distributions, interim distributions, until the bank was made whole.

Now you have just answered the distribution side, but you have not answered the salary side.

Mr. FOREN. OK. Our control is at the SBIC level. It is not at the small business concern level, nor should it be. SBICs can distribute or can pay not more than 2½ percent of their combined capital, defining combined capital to include private capital and SBA leverage.

No more than 2½ percent of that can be used for management expenses, without our prior approval. Now there will be instances during the early years when the company's ramping up that we may approve a little higher percentage. But in later years, when the company is merely managing the portfolio and has less management need, in terms of overhead, the percentage may be smaller. Or as the fund grows, 2½ percent may be a little too generous.

There are controls at the SBIC level, but not at the small business concern level.

Senator BENNETT. I see. Thank you.

Senator LAUTENBERG. The thing, Mr. Foren, that interests me is—what I would like to do is make as much of the government guarantee available as we can and at the same time reduce or contain the risks. There is some risk at some point. I do not know what our loss ratio has been. I imagine it is relatively small.

But I would like you to submit for the record what the loss experience has been.

But all of us are familiar with things like subordinated lending. Now in many cases, a primary creditor will say, or even someone who has some special value to add, will say I get my money out first and the other creditors have to understand that there is a general creditor that precedes—or a special creditor—that precedes the distribution to others.

I just wonder whether we as government have a chance to recover our investment so this kind of revolving fund can continue to be used. We are not favoring a single SBIC. What we are favoring is the community they serve out there, trying to create the opportunity for small business to succeed.

I do not want to take any more of the Committee's time, but I would appreciate—and we probably have it and I am just not up to date, and I apologize if—

Mr. BOWLES. We can get that for you, Senator.

Mr. FOREN. The loss experience is around 14 to 15 percent in the program over time.

The debenture is a subordinated debenture. We have tightened it up a bit. It is not as subordinate as it used to be. But the equity—participating securities and equity security is not a dead instrument. It means—

Senator LAUTENBERG. Right. Therefore, if it is an equity security, I mean someone is there to reap a pretty good harvest if it takes place.

Mr. BOWLES. The private money actually goes in first.

Senator LAUTENBERG. To what extent? What do they have to have? You are not talking about \$18 million net worth as still qualifying as small business and then someone coming to the government to get a favorable loan guarantee?

I agree with something Senator Pressler said earlier, that we are really expanding the size of this thing at a fairly significant rate. But how much private capital does there have to be in there? Is there a formula?

Mr. BOWLES. What we hope is each one of the new SBICs will have at least \$10,000 of equity capital in there. They can leverage that up about 2 to 1 with our funds. And if they cannot make any investment that is greater than 20 percent of their equity capital—

Senator LAUTENBERG. If they have \$10 million, just give me a quick example, if they have \$10 million of equity capital, how much can they come to us for?

Mr. BOWLES. They can get \$20 million in a new security from us.

Senator LAUTENBERG. In guarantees by the government?

Mr. BOWLES. Right.

Senator LAUTENBERG. And then who provides the cash? The banks provide the cash?

Mr. BOWLES. The credit subsidy on that is somewhere around between 10 and 15 percent.

Mr. FOREN. What we do, Senator, is we guarantee those securities. Those securities are pooled and pass through certificates are sold in the public market to fund those securities.

Senator LAUTENBERG. OK. Mr. Chairman, thank you. I think this is the agency that has the training, has the experience, to conduct these programs. And I do not mind, as you can tell, kind of a close review of what it is that is going on. I think that is our responsibility.

Mr. BOWLES. We would be happy to meet with you any time, Senator.

Senator Lautenberg. But to create another bureaucracy, again, I am sure would just titillate the fancy of the American public.

The CHAIRMAN. Senator Lautenberg, you asked something about the public in your initial response, how would they feel about setting up another bureaucracy. Will Rogers said something about 55 or 60 years ago that is relevant today.

He says, the American people don't know what they want and they're willing to bit somebody to get it.

Senator PRESSLER. Mr. Chairman, could I just ask one last question.

I hope that you are able to sit in on cabinet meetings and that you do not yield to cabinet members, because I consider you more knowledgeable than many of them in this area.

Does the cabinet have meetings? Do you get to sit in on cabinet meetings?

Mr. BOWLES. I am going to an NEC meeting this afternoon.

Senator PRESSLER. OK. Well, do not yield to those guys, because—let me say that I do not vote for the creation of new cabinet members any more, because I think the President of the United States should have six or seven cabinet members who report to him, really report to him, not through layers of White House staff.

The cabinet is becoming one of the largest, most undistinguished groups in the world, not necessarily this one, but all of them. I said that under Ford and Reagan also, next to the Senate maybe.

But do not yield to those cabinet guys. And we will back you up.

And by the way, we have two friends of Bill here, Bill's best friends, so I hope the two of you talk to the President about this.

The CHAIRMAN. Mr. Bowles and Mr. Foren, thank you very much for being with us today.

Mr. BOWLES. Thank you, Mr. Chairman.

The CHAIRMAN. Next, we have a panel of three witnesses. The second panel is Mr. Jeffrey Walker, managing partner of Chemical Venture Partners; Mr. Donald R. Lawhorne, president of MESBIC Ventures, Inc., in Dallas; and Mr. Harvey Wertheim, general partner, Harvest Ventures, Inc. in New York.

If you will, gentlemen, just take your seats at the table. We are running considerably behind time here and we need to summarize these statements. I am sure you are prepared to do that.

Mr. Walker, you are first on my list, so please proceed.

STATEMENT OF MR. JEFFREY C. WALKER, MANAGING PARTNER, CHEMICAL VENTURES PARTNERS

Mr. WALKER. Thank you, Mr. Chairman and Members of the Committee.

I am the managing partner of Chemical Ventures Partners, which is the managing entity of Chemical Venture Capital Associates, an SBIC with \$249 million in capital Chemical Banking Corporation, the third largest bank holding company in the country, is the sole limited partner of Chemical Venture Partners. I founded Chemical Ventures Partners in 1984.

CVP also manages other partnerships bringing the total funds under management to \$1.5 billion. And we invest in a variety of funds as well. We have made over 158 investments since 1984 when we were founded and we focus on venture capital and middle market transactions.

I would like to speak to you today to support your proposed amendment to the Critical Technologies proposal and give you some real live examples of technology and early stage investing that CVP has done through its SBIC over the last 10 years. While I believe a significant amount of SBIC funds have already been directed toward early stage venture capital, I think the new regulations you passed last year will attract even more young companies to use SBIC.

I also believe that concentrating the resources of the government through one investment program instead of having two programs that would compete against each other will increase your likelihood of success if your interest is to promote technology in early stage investments.

I have included an attachment with my testimony that lists examples of venture capital investments that are currently in our portfolio and have been booked through our SBIC.

Within the lists I have included not only critical technology investments in that specific categorization, but others that were made in early stage companies and industries that include retailing and other service-based businesses; because they produce jobs, enhance productivity and create new products as well.

We have approximately 20 percent of our SBICs' capital or \$54 million invested in health care, software and electronics businesses. That is what I classify as critical technologies. If you add early stage retail and other related businesses, the percentage of our SBIC portfolio in these areas would increase to 30 percent.

The remainder of the portfolio is in later stage venture capital and other middle market companies.

The investments listed in the testimony were made under the previous SBIC size and affiliation rules and regulations. However if the current proposed size regulations, which Mr. Bowles discussed, were in effect a couple of years ago, we would have made quite a few other high tech investments.

The CHAIRMAN. Mr. Walker, in case I forget, let me interrupt you. And I am reluctant to do this.

Mr. WALKER. Sure.

The CHAIRMAN. But raising the size standard to 18 million from 6 million—

Mr. WALKER. Yes, sir.

The CHAIRMAN. Is that going to cause SBICs to have a tendency to look to wealthier companies rather than the smaller ones? In other words, all things being considered, if you have a choice of investing in a company with \$15 million net worth and a company with \$8 million net worth, are they going to opt for the \$15 million company?

Mr. WALKER. I do not look at size when I evaluate an investment.

The CHAIRMAN. You do not?

Mr. WALKER. I evaluate an investment by looking at its potential, not its current size.

The CHAIRMAN. Go ahead. We will talk about that later.

Mr. WALKER. But it is going to be even better for SBICs now. We are going to have more companies that really need the capital for high tech because of the increase in the size standards.

Just to give you another example, we currently have signed letters of intent on three new high technology deals totalling \$18 million in total financing. We should close these in the next couple of months.

One is in temperature controlled polymers. Another is in blood processing filtration devices. And another is optical products. Obviously, by these examples, technology investments definitely qualify for SBICs.

In addition, we have over 50 other venture capital deals, currently under investigation. And any one of those could fit in the SBIC.

I would like to give you a couple of examples of transactions that we have been involved in. These are examples of technology deals that SBICs can and have been involved in.

The first one is Cyberonics, which is a Houston-based company started in 1987. It has developed a device for the treatment of epilepsy through stimulation of a thing called the vagus nerve, which is in your spinal column.

There are over 1.6 million people in the United States who suffer from epilepsy and 20 percent cannot be treated effectively because of the severity of the disease. In clinical trials done since 1988, the product this company has produced has proven effective and safe in treating even the most severe symptoms.

Cyberonics has submitted a request for approval from the FDA for sale of the product. This company went public this year and has a very bright future. We invested in this through an SBIC.

The second example is the Educational Software Corporation, a San Diego-based company that has created computer aid instruction systems for primary schools. The system works on any computer and is revolutionizing the way students learn. They go at their own pace and they have fun doing it, too.

When we backed the company in 1987, it had been said by many venture capitalists to be too risky because it focused on the not for profit area. They did not think schools could afford them.

We backed an entrepreneur, John Kernan, and he made it work. Now the company employs 2,000 people and has installations in over 9,000 schools across the country.

These two investments required long-term patient capital to make them work and that is just what is available through the new SBA preferred stock program alternative. Congress has finally gotten it right. The new preferred stock is a good blend between postponing principal and interest payments and the equity given to the government is a fair compensation for the deferral, in my opinion.

The old program did discourage some people from investing in early stage companies, because it had the subordinated debt component to it. However, it has been fixed and you are going to see a lot more companies that are early stage being invested in by SBICs.

I have spoken to a number of SBICs and other venture capitalists who are now considering using the SBIC program because of the new preferred stock structure. If you make sure sufficient funds are allocated to the program and that the bureaucracy and regulations involved in being part of the program are minimized, there will be many people who will use SBICs for venture capital investments.

In conclusion, I wholeheartedly support your amendment. For the first time in many years, the new SBA administrator has the background and ability to set up a market-oriented investment program that can both meet the needs of the current SBIC program and those that are currently proposed for the critical technologies companies.

We should not hinder Mr. Bowles by having two programs competing against each other. Congress should give the new SBIC preferred stock program that you passed last year time to work. If Congress splits these sources and sets up conflicting programs, you will confuse the industry, you will confuse me, and you will confuse investors and other companies soliciting funds.

By concentrating funding staff and supervision resources and marketing under one program, you will not only be more efficient, but more effective. I do not believe there is anything that the critical technologies program proposes that cannot be done through an SBIC. I also believe that the quickest way to get the funds to the critical technology companies is through using the already functioning SBIC program.

Thank you for the opportunity of testifying and I will be happy to answer your questions.

[The prepared statement of Mr. Walker follows:]

JEFFREY C. WALKER
TESTIMONY TO THE SENATE SMALL BUSINESS COMMITTEE
AT 10:30 A.M. ON JUNE 9, 1993

SPEAKER BACKGROUND

Good morning, my name is Jeffrey C. Walker and I am the Managing Partner of New York City and Los Angeles based, Chemical Venture Partners (CVP). CVP is the managing entity for Chemical Venture Capital Associates (CVCA), a Small Business Investment Company (SBIC) which has a current capital base of \$249MM and CB Capital Investors, Inc., (CBCI), also an SBIC, which has capital of \$20MM. I am also a Senior Managing Director with Chemical Bank. Chemical Banking Corporation (the third largest Bank Holding Corporation in the United States, with assets in excess of \$140 billion) is the sole investor in these two SBICs. I co-founded Chemical Venture Partners in 1984 and have been an active venture capital investor since that time. Prior to 1984, I was a consultant and CPA for Arthur Young & Company, worked in the Investment Banking division of Chemical Bank, and earned a BS from the University of Virginia and an MBA from the Harvard Business School. I am on numerous corporate and non-profit boards including the National Association of Small Business Investment Companies (NASBIC) and the Wilton Connecticut Board of Education.

Chemical Venture Partners currently manages several investment partnerships which have total investment capital of \$1.5 billion. One half of this capital is invested directly in corporations and the other half is invested in other venture capital and management acquisition funds. Because of this balanced approach toward investing, I speak to you as both a venture capitalist and a private equity fund investor. CVP has made over 158 investments since 1984 and focuses on venture capital and middle market financings across the United States.

SUMMARY

My purpose in speaking to you today is to support your proposed amendment to the Critical Technologies proposal and to give you some real life examples of technology and early stage investing we have done through our SBICs over the last ten years. While I believe that a significant amount of SBIC funds have already been invested in early stage venture capital, I believe that the new SBIC regulations (updated by the Equity Enhancement Act you passed last year) will attract even more investments in young companies. I also believe that concentrating the resources of the government through one investment program, instead of having two programs that could compete against each other, will increase the likelihood of success if your interest is to promote technology and early stage investments.

CVP VENTURE PORTFOLIO

In Attachment I, I have listed some examples of venture capital investments that have been made by our group through the SBIC. Within the list, I have included not only standard technology investments, but others that were made in early stage companies in other industries since those also produced jobs, new products and enhanced productivity.

We currently have approximately 20% of the SBIC's capital (\$54MM) invested in healthcare, software and electronics businesses. If you add our early stage retail and related businesses, that percentage would increase to 30%. The remainder of our portfolio is invested in later stage venture capital deals and medium-sized companies.

The investments listed in Attachment I, were made under the previous SBIC size rules and regulations. If the current proposed size regulations were in place several years ago, we would have booked several other high technology investments in the SBIC (instead, we had to book them in other entities and take non-voting stock). Some of these investments are listed in Attachment II

We have signed Letters of Intent on three other high technology deals that will be booked in the SBIC. The total investment in those three deals will be \$18MM and the areas the companies operate in include temperature controlled polymers, blood processing filtration and optical products.

In addition to these, we have another 50 early stage venture capital deals we are currently looking at which would qualify for the SBIC if we closed any of them.

EXAMPLES

The following are a couple of examples of investments we have made. These should give you an idea of the kind of technology deals that have been done by SBICs.

Cyberonics - a Houston based company, started in 1987, that has developed a device for the treatment of epilepsy through the stimulation of the vagus nerve. There are over 1.6 million people in the US that suffer from the disorder and 20% have it so severely that there is no current effective treatment available. In clinicals done since 1988, the product has proven safe and effective in treating even the most severe symptoms. Cyberonics just submitted a PMA to the Food and Drug Administration for approval of their product. The company went public in March of this year.

Educational**Software**

Corporation - a San Diego based company that has created a computer aided instruction system for elementary schools. The system works on any computer and is revolutionizing the way students learn. They go at their own pace and have fun doing it. When we backed the company in 1987 it had been said by many venture capitalists to be too risky since it sold to the not-for-profit world. We invested in the company and the CEO, John Kerman, made it work. His team now employs 2,000 people and has installations in more than 9000 schools nationwide. We sold it to Jostens in 1989 and the company has continued growing.

NEW SBIC PROGRAM

With the new SBA preferred stock financing program, many more investors will be entering the SBIC program. The new preferred stock is a good blend between postponing principal and interest repayments until a company matures and giving the government an equity upside (like the Chrysler loan guarantee) in exchange for the principal and interest deferral. The old subordinated debt only program did discourage early stage company investments because the early stage companies couldn't afford to pay any interest in the first several years. We were not affected by the subordinated debt structure since we did not use SBA leverage, therefore, we could use the SBIC for early stage deals.

I have spoken with numerous SBICs and other venture capitalists who are now seriously considering using an SBIC because of the new preferred stock structure. If you make sure that sufficient funds are allocated to the program and that the bureaucracy and regulations involved in being part of the program are minimized, then you will have many of people that will use SBICs for venture capital investments.

Also, the SBA has rewritten the size standards which will allow larger venture capital investments to be booked in SBIC's. The new size limits should allow most developmental opportunities to be considered by qualified SBICs.

ADDITIONAL ENHANCEMENT

To further draw capital and venture capitalists to the program, you might consider lowering the capital gains rate for qualified SBIC investments. These are the kinds of investments that you want to motivate - investments in small and medium sized growth companies that will produce jobs and enhance this country's productivity.

CONCLUSION

I wholeheartedly support your amendment to the Senate Commerce Committees' Critical Technologies Proposal. For the first time in many years, the new SBA Administrator has the background and ability to set up a market oriented investment program that can both meet the needs of the current SBIC program and those that are currently proposed for Critical Technologies Companies. Congress should give the new SBIC preferred stock program which you passed last year, time to work. If Congress splits the resources and sets up conflicting programs, you will confuse the industry, the investors, and companies soliciting funds. By concentrating funding, staff and supervisory resources, and marketing under one program, you will not only be more efficient, but more effective. The current SBIC program can do everything Congress is looking for.

Thank you for the opportunity to testify. I would be pleased to answer any questions you may have.

ATTACHMENT I

CVP VENTURE PORTFOLIO

INDUSTRY	COMPANY NAME	BUSINESS	LOCATION	\$ INVESTED (000'S)	CURRENT FAIR MARKET OR VALUE AT TIME OF SALE (000'S)
HEALTHCARE	<i>Thermoscan</i>	Tympanic Thermometers	San Diego, CA	\$2,820	\$5,000
	<i>Cyberonics</i>	Medical Device for Epilepsy	Houston, TX	\$2,752	\$4,515
	<i>Somerset Pharm.</i>	Drug for Parkinson's Disease	Somerville, NJ	\$566	\$3,734
	<i>Block</i>	Optical Buying Service and Service to HMOs	Roseland, NJ	\$1,052	\$1,052
	<i>Gilead Sciences</i>	Biotechnology for Human Therapeutics	Foster City, CA	\$5,497	\$7,848
	<i>Collegiate Health</i>	Student Health Care Services	Darien, CT	\$440	\$440
SOFTWARE	<i>Educational Software Corp.</i>	Computer Aided Instruction for K-12 Schools	San Diego, CA	\$2,411	\$6,141

CVP VENTURE PORTFOLIO

INDUSTRY	COMPANY NAME	BUSINESS	LOCATION	\$ INVESTED (000'S)	CURRENT FAIR MARKET OR VALUE AT TIME OF SALE (000'S)
SOFTWARE (CONT'D)	<i>Computerized Added Services</i>	Computerized Analytic Systems for Auto Repair Stores	Palo Alto, CA	\$3,603	\$3,603
COMPUTERS/ COMMUNICATIONS & ELECTRONICS	<i>TA Instruments</i>	Thermal Analysis Instruments	Wilmington, DE	\$13,711	\$25,000
	<i>Veeco</i>	Semiconductor Testing Equipment	Plainview, NY	\$5,203	\$6,500
	<i>Muir Test Systems</i>	Computer Testing Equip.	Hopkinton, MA	\$319	- 0 -
	<i>BE Avionics</i>	Airline Passenger Control Units	Santa Anna, CA	\$3,504	\$7,449
	<i>Aerostat</i>	Systems Engineering	Columbia, MD	\$300	\$3,000
	<i>Sterling</i>	Coaxial Cable Panels	Westlake Village, CA	\$125	\$125
	<i>Flightline Electronics</i>	Detection Devices & Electronic Test Equipment	Fishers, NY	\$954	\$1,500
	<i>PTN</i>	Trade Publications	Mciville, NY	\$11,547	\$14,000

CVP VENTURE PORTFOLIO

INDUSTRY	COMPANY NAME	BUSINESS	LOCATION	\$ INVESTED (000'S)	CURRENT FAIR MARKET OR VALUE AT TIME OF SALE (000'S)
COMPUTERS/ COMMUNICATIONS & ELECTRONICS (CONT'D)	<i>Quality Components</i>	Powdered Iron Coils	St. Marys, PA	\$6,000	\$6,000
RETAIL	<i>Office Depot</i>	Office Supply Warehouse	Boca Raton, FL	\$2,451	\$32,765
	<i>Gymboree</i>	Children's Clothing Retailer and Play Centers	Burlingame, CA	\$2,082	\$21,700
	<i>Auto Parts Club</i>	Auto Parts Warehouse	San Diego, CA	\$4,327	\$4,327
	<i>Domain</i>	Furniture Retail	Norwood, MA	\$3,890	\$3,890
	<i>Expressly Portraits</i>	One Hour Portraits	Palo Alto, CA	\$1,981	\$3,000
	<i>Office Mart</i>	Office Supply Warehouse	St. Petersburg, FL	\$2,838	\$3,900
	<i>Ameriserve</i>	Food Service Distributors	Dallas, TX	\$3,921	\$3,921
OTHER	<i>Applied Extrusion Technology</i>	Plastic Extrusion Process	Middletown, DE	\$2,800	\$2,300
	<i>Drilltec</i>	Pipe Packaging Systems for Oil Industry	Houston, TX	\$7,638	\$7,676

ATTACHMENT II

**COMPANIES THAT WOULD HAVE BEEN BOOKED
IN THE SBICS IF THE CURRENT PROPOSED
REGULATIONS WERE IN EFFECT**

COMPANY NAME	BUSINESS	LOCATION	\$ INVESTED (000'S)	CURRENT FAIR MARKET OR VALUE AT TIME OF SALE (000'S)
<i>TSG</i>	Pay Phone Automation	Melbourne, FL	\$750	\$750
<i>Horizon Cellular</i>	Rural Cellular Phone Consolidation	Doylestown, PA	\$5,500	\$5,500
<i>Envirotest</i>	Environment Emissions Testing	Tucson, AZ	\$13,817	\$28,872
<i>AER Energy</i>	Lithium Battery Technology	Smyrna, GA	\$506	\$506
<i>Maxtor</i>	Computer Technology	San Jose, CA	\$1,000	\$2,787

The CHAIRMAN. Thank you very much, Mr. Walker.
Mr. Lawhorne?

STATEMENT OF MR. DONALD R. LAWHORNE, PRESIDENT, MESBIC VENTURES, INC.

Mr. LAWHORNE. Good morning, Mr. Chairman. I am Don Lawhorne, chairman of the National Association of Investment Companies, the trade association representing the minority venture capital industry.

As an industry practitioner, I am president of the MESBIC Ventures Holding Company, which owns 100 percent interest in three specialized small business investment companies, MESBIC Ventures, Alliance Enterprise Corporation and Power Ventures.

MESBIC Ventures holds the distinction of being the oldest specialized SBIC in the nation and the first of its kind in Texas when licensed in 1970. Alliance was licensed in 1971. Power Ventures was licensed in 1981. All three funds are based in Dallas.

Our shareholders include NationsBank, Sun Company, IBC, Xerox, Frito-Lay, Bank One, Mobil, Arco and a host of other fortune 100 type companies. On a consolidating basis, our total assets exceed \$28 million, which places our funds under management within the top five of the specialized small business investment companies in the nation.

I am pleased to have the opportunity to appear before you today to discuss the successful track record the specialized SBIC industry has in developing this country's minority-owned businesses, including those which fall within the definition of high technology firms.

A copy of my formal remarks has been submitted for the record. I will briefly review the highlights.

The idea of a critical technology investment program within the Commerce Department is totally unnecessary and most untimely in an era where examples of government redundancy and glaring inefficiencies have become fodder for the national and local prime time media.

Let me begin by commending you particularly, Mr. Chairman and this Committee, for all the long-standing support that we have had as a specialized small business investment company industry. Your support has enabled us to invest over \$1 billion in 12,600 minority firms during the last 10 years.

As the Committee knows very well, this has been a period where we have tackled, on a regular basis, declining levels of funding and we have also been operating in what many see as a very turbulent economic period in the nation's history.

Yet I am pleased to report today that our industry has played a key role in providing the vast majority of patient capital for growing minority businesses across a broad range of industries, including what we are discussing here today as critical technology firms.

Our industry entered the nineties equipped to participate in the financing of larger and more rapidly growing minority owned firms with proven management teams. These are attributes often associated with emerging technology firms.

For example, just a few weeks ago, an African-American owned company, Envirotest Systems Corp. went public. Envirotest quali-

fies as a company that has developed an environment critical technology aimed at reducing automotive pollution through its proprietary ignition testing systems. It has become a leader in developing emission testing software and recently received a contract from the EPA to exclusively design high volume, high throughput systems.

Equally important, this was the first African-American owned firm backed by specialized small business investment companies to go public and one of only seven African-American owned firms to ever go public in American business history.

Another example of critical technology financed by our industry is Alamo Technology. This Hispanic-owned engineering firm has designed an automated jet engine test set that uses 50 percent less fuel, 50 percent less labor and reduces retest time 75 percent when testing jet engines used by the military.

We are currently working with that firm to develop a commercial version of this product. This company created the initial design, the prototype testing, the subsequent manufacturing insulation with patient capital provided by four specialized SBICs.

Another example of our technology thrust is the California-based specialized SBIC providing financing to Micronics Computers, a leading designer and manufacturer and marketer of high performance, industry standard microcomputer products.

Micronics produced products include 8386 and 8486 system boards, portable computers, terminals, based on the highest level of technology available. Under the management of Micronic's president, Frank Lynn, dynamic growth and creative marketing strategies enabled this company, after the initial funding of the specialized investment, to have a 525 percent increase in revenues in 1991 when it went public and soon thereafter had watched its third quarter sales levels go from nearly \$35 million, 64 percent higher than the previous third quarter.

The SSBIC industry has also invested in Cybernetics Systems International Corp, which develops and markets automated work force management systems and software controls for work place applications. This company was founded by two Hispanic industrial engineers.

Our financing helped recapitalize the company and provide much needed capital for growth and new product development.

The association recently conducted an extensive survey of the investments of the top 16 specialized small business investment companies in the country during the period from January 1, 1981 to June 30, 1991. Although our companies, on average, tend to be smaller than other venture capital firms, thereby lacking the deep pockets often required to accept the risk of high technology investments, the study showed that portfolio investments of the 16 companies represented an exceptionally high level of high technology firms.

Almost 50 percent of the companies fell within the high tech categories of telecommunications, computers, electronics and medical-related industries.

As already mentioned, within the past year we have seen three of our high tech companies go public. My point here is the vast majority of specialized SBICs are diversified investment firms which

include financing directly and indirectly involving products and services derived from critical technologies.

This area will play an even larger role for specialized small business investment companies as defense technologies, NSF-funded technologies and small business innovation research technologies are made more readily available for commercialization.

Equally important, this week's cover story of Business Week cites how the private sector, big business in particular, spent \$1 trillion on information and communication technologies in the last decade. These technologies are often far ahead of their application.

So we have entered an era where the best thing that we can do at the Federal level is to ensure that these critical technologies help fuel the national economy and strengthen American competitiveness by making sure that government is less costly and more responsive to needs dictated by market forces rather than political forces.

The existing SSBIC program has a 23-year track record of distributing patient capital into a broad range of industries, including critical technologies. A few refinements of the existing SSBIC program will enable capital to further reach into market driven technology niches.

Since we already have the venture capital mechanism within SBA through the SBIC and SSBIC programs, the focus should be on providing incentives to these companies with proven venture capital experience to invest in more high technology deals. This would negate the need for duplicating the regulatory and funding structures of the SBIC program in another government agency.

It would also place the focus of the proposal where it belongs, not on creating new programs with their inherent costs, but on targeting capital by providing the required incentives to existing programs.

The proposal to create an entirely new program within the Commerce Department fails to recognize the level of venture capital talent required in the changes and challenges of raising new private capital for such a program. In short, the program does not make sense.

As chairman of an association representing the minority venture capital industry, I must note my concern that any proposal to do anything with regard to technology must keep in mind the importance of attracting capital for minority-owned high technology firms. The proposal, with its current incentives, might arguably attract funds to invest in majority-owned high tech companies, but there is certainly nothing in the current proposal to enhance the minority market place.

Too many decisions are made by policymakers that tend to view minority business in this country as a community of mom-and-pop enterprises, all contained within a specific innercity geographic area.

I stand before you to tell you that that is not the case. The very success of our industry has proved that the country's minority business community represents high-growth ventures across the land; and although our companies are not confined to specific areas, there is no denying that our companies, regardless of where they

are located, create job opportunities in those sectors of the American economy where they are needed most.

For example, a study recently done by Dr. Tim Bates, that led to the publishing of a book, *Banking on Black Enterprise*, published by the Joint Center on Political Studies, focused on black firms. And his research clearly pointed out that minority firms consistently will hire more often than small majority firms, minority employees; and that becomes a very important part of impacting the infrastructure within the minority community.

With the proposed creation of a new small business venture capital program, during a time of budget cuts, we are understandably alarmed about the potential impact on the current program's funding.

We fully expect a significant increase in leverage demand during the fiscal year ahead. As mentioned earlier here today in testimony, new licensees coming down the path, all of these are going to be areas that will impact available funding.

In our own case, the specialized small business investment area, we expect that several things will improve our need for funds. One is the implementation of the Small Business Equity Enhancement Act, which has been talked about here today, spearheaded by this Committee. It includes several provisions to help draw more capital into the industry.

Also, the implementation of the preferred stock buyback, which is specifically applicable to the specialized SBICs. This will lead to needing more capital. The potential passage of a minority business tax incentive, the House has already approved that. We hope the Senate will support that. That will be designed to help draw capital, private capital, into our side of the industry; and in turn, will increase our need for leverage.

Finally, you are aware of the private marketing efforts that we have done as an industry, to create a much larger pool of venture capital funds from sources who historically have not participated in helping build minority businesses.

The new administration has voiced strong support of minority capital formation, and the SBA is playing and has played an instrumental role in making capital formation initiatives. And I want this testimony today to help point out and reinforce your own personal view, where a critical technology investment company is unnecessary, and particularly trying to create something that is a duplicate, or at the expense of another program.

We have proven over the years that we can successfully invest in specialized markets, and make a return on investment. We have assisted in creating wealth, and witnessed the positive impact many of these companies have had on the individual communities. We have developed the venture capital talent, the national network, the deal flow, the institutional and entrepreneurial relationships.

Our ability to continue to track capital in this industry is critically dependent upon a stable and reliable public-private partnership. The relationship for creating, the responsibility for creating and maintaining a balanced environment must be shared by the government and private sector, both who have invested resources and time.

Mr. Chairman, your leadership and support for the Specialized SBIC program is greatly appreciated; and we thank you for letting us share our views on this critical topic.

[The prepared statement of Mr. Lawhorne follows:]

PREPARED STATEMENT OF DONALD R. LAWHORNE

Good morning, Mr. Chairman and Members of the Senate Small Business Committee. I am Donald R. Lawhorne, chairman of the National Association of Investment Companies, the trade association representing the minority venture capital industry. As an industry practitioner, I am president of MESBIC Ventures Holding Company (MVC), which owns 100 percent of three Specialized Small Business Investment Companies (SSBICs). MESBIC Ventures, Inc. (MVI), Alliance Enterprise Corporation (AEC), and Power Ventures, Inc. (PVI).

MVI holds the distinction of being the oldest SSBIC in the Nation, and the first of its kind in Texas when licensed in 1970. AEC was licensed in 1971 and PVI was licensed in 1981. The three funds are based in Dallas.

MVHC has 80 corporate shareholders including NationsBank, Sun Company, IBM Corporation, Xerox Corporation, Frito-Lay, Inc., BANK ONE, TEXAS, Mobil Oil Corporation, ARCO Oil and Gas Corporation, Oryx Energy Company, Computer Associations International, Inc., and the Coca-Cola Company. On a consolidated basis, total assets exceed \$28 million which places MVHC's venture funds under management within the top five of nearly 130 SSBICs located throughout the United States.

I am pleased to have the opportunity to appear before you today to discuss the successful track record of the SSBIC industry in developing this country's minority-owned businesses, including those which fall within the definition of high technology ventures.

A copy of my formal remarks has been submitted for the record. Today, I will briefly highlight why we believe that the proposal to create a Critical Technology Investment Program (CTIP) within the Commerce Department is totally unnecessary and most untimely in an era where examples of government redundancy and glaring inefficiencies have become fodder for the National and local prime time media.

Let me begin by commending you and each committee Member for the longstanding commitment and dedication to the Specialized Small Business Investment Company industry. Your support has enabled us to invest over \$1 billion in approximately 12,600 minority-owned small businesses during the last 10 years.

As this Committee knows very well, this period included numerous hurdles ranging from declining levels of funding during one of the most turbulent economic periods in our Nation's history. Yet, I am pleased to report today that our industry has played a key role in providing the vast majority of patient capital for growing minority businesses across a broad range of industries, including critical technology firms.

Our industry entered the nineties equipped to participate in the financing of larger and more rapidly growing minority-owned firms with proven management teams. These are attributes often associated with emerging technology firms. For example, just a few weeks ago, an African-American owned company, Envirotest Systems Corp. went public.

Envirotest qualifies as a company that has developed an environmental critical technology aimed at reducing automotive pollution through its proprietary emission testing systems. It has become a leader in developing emission testing software, and recently received a contract from the EPA to exclusively design high volume, high throughput systems.

Equally important, this was the first African-American owned firm backed by SSBICs to go public, and one of only seven African-American firms to ever go public.

Another example of critical technology financed by the SSBIC industry is Alamo Technology, Inc. (ATI). This Hispanic-owned engineering firm has developed an automated jet engine test set that uses 50 percent less fuel and 50 percent less labor, and reduces retest needs by 75 percent when testing a broad range of jet engines used by the military. Current development is underway to commercialize this product.

ATI created the initial design, prototype testing, and subsequent manufacturing and installation with patient capital provided by four Specialized SBICs.

A California-based SSBIC provided financing to Micronics Computers, Inc., a leading designer, manufacturer and marketer of high performance, industry-standard

microcomputer products. Micronics products include 80386 and 80486 system boards, portable computers and X-Terminals, based on the highest level of technology available. Under the management of Micronic's President, Frank Lin, dynamic growth and creative marketing strategies shortly after the initial SSBIC investment resulted in a 525 percent increase in revenue to \$25 million from \$4 million the previous year. Micronics went public in July, 1991, and in its first quarterly report as a public company it reported that sales reached \$34,977,000 in the third quarter, up 64 percent from the previous year's third quarter.

The SSBIC industry also invested in Cybernetics System International Corporation, which develops and markets automated workforce management systems and software that control and administer intricate workplace schedules. The company was founded in 1980 by Claudio Mendoza and Gustavo Agusti, two Hispanic industrial engineers. Our financing helped recapitalize the company and provide much needed capital for growth and new product development. After a period of slow sales and unprofitability in late 1990 and early 1991, the company has signed major new contracts with Pacific Bell and the Florida State Department of Transportation.

The association recently conducted an extensive survey of the investments of the top 16 SSBICs in the country during the period from January 1981 to June 30, 1991. Although our companies on average tend to be smaller than other venture capital firms, lacking the "deep pockets" often required to accept the inherent risk of high technology investments, the portfolio investments of the 16 companies represented an exceptionally high level of high technology ventures. Almost 50 percent of the companies fell within the high technology categories of telecommunications, computer, electronics, and medical related industries. Within the past year, we have seen three of our high technology companies go public.

My point here is that the vast majority of SSBICs are diversified investment firms which include financing, directly and indirectly involving products and services derived from critical technologies. This area will play an even larger role for SSBICs as defense technologies, NSF funded technologies, and small business innovation research technologies are made more readily available for commercialization. Equally important, this week's cover story of *Business Week* cites how businesses spent \$1 trillion on information and communication technologies in the last decade, but showed little gain in efficiency.

We have entered an era where some technologies are far ahead of applications and market receptivity. Clearly, the most effective way for the Federal government to ensure that these critical technologies help fuel the National economy and strengthen America's competitiveness is to make government less costly and more responsive to the needs dictated by market forces rather than political forces.

The existing SSBIC program has a 23-year track record of distributing patient capital into a broad range of industries, including critical technologies. A few refinements of existing SSBIC programs will enable capital to further reach into market-driven technology niches.

Since we already have the venture capital mechanism within the SBA through the SBIC and SSBIC programs, the focus should be on providing incentives to those companies, with proven venture capital experience, to invest in more high technology deals. This would negate the need for duplicating the regulatory and funding structures of the SBIC program in another government agency. It would also place the focus of the proposal where it belongs—not on creating entirely new programs with their inherent costs, but on targeting capital by providing the required incentives to existing programs. The proposal to create an entirely new program within the Department of Commerce fails to recognize the level of venture capital talent required and the challenge in raising private capital to start such a program. In short, the program does not appear to be well thought out or clearly defined.

As chairman of the association representing the minority venture capital industry, I should also note my concern that there are no provisions within the proposal to attempt to attract capital to minority-owned high technology companies. The proposal, with its current incentives, might arguably attract funds to invest in majority-owned high technology companies, but there is certainly nothing in the current proposal to enhance the minority marketplace.

Frankly, as we listen to the Administration's goals and objectives to promote small businesses and high growth companies, and see the accompanying proposals, which, like S. 4, fail to incorporate incentives for minority business investments, we have to begin to wonder whether the proponents of these proposals view minority companies as potentially high growth companies. Every time we examine a program dealing with high growth businesses, minority companies are left out of the equation.

Too many public policy decision-makers appear to view minority businesses in this country as a community of mom-and-pop enterprises, all contained within specific innercity geographic areas. I stand before you today to tell you they are wrong. The very success of our industry is proof that this country's minority business community represents high growth ventures across the country. And although our companies are not confined to specific innercity areas, there is no denying that our companies, regardless of where they are located, create job opportunities in those sectors of the American economy where they are most needed.

I would like to bring to this Committee's attention a recent book by Dr. Timothy Bates, chairman of the Urban Policy Analysis Program at the New School for Social Research in New York. The book, *Banking on Black Enterprise*, which was published by the Joint Center for Political Studies, focuses on black-owned firms. Dr. Bates' research suggests that the most direct approach to increasing minority employment is to invest in minority owned firms. When he reviewed firms located in 28 large metropolitan areas, he discovered 89 percent of the black-owned firms had workforces consisting of at least 75 percent minorities. In comparison, 60 percent of the non-minority owned businesses hired no minorities whatsoever.

Approaching the subject from another angle, Bates researched the same 28 large metropolitan areas and studied them by minority versus non-minority neighborhoods. He found that, even in minority communities, non-minority-owned firms hired predominantly non-minorities. Alternately, black-owned firms located in non-minority neighborhoods still tended to hire minorities.

Clearly, the positive impact of investing in minority-owned firms goes far beyond the dollar amount of that initial investment to the strengthening of the very infrastructure of the minority community.

And with the proposed creation of a new small business venture capital program during a time of budget cuts, we are understandably concerned about the program's potential impact on our current program's funding. We fully expect a significant increase in leverage demand during fiscal year 1994. This increase in demand will occur for a number of reasons, including:

The implementation of the Small Business Equity Enhancement Act.—The Small Business Equity Enhancement Act, spearheaded by this Committee, includes several provisions which will help draw more new capital into the industry, perhaps most significant of which is the provision which recognizes certain State and local funds as private capital. NAIC has received so much outside interest as a result of this provision that we have formed a special marketing committee to meet with State and local officials to discuss the program.

Implementation of the preferred stock program. The SBA is implementing a program which will allow existing companies to repurchase preferred stock formerly sold to the government to restructure their balance sheets to enhance their ability to attract additional capital.

Potential passage of minority business tax incentives.—The House has already approved, and we hope to incorporate into the Senate budget proposal, important tax incentives to invest in the Specialized SBIC industry. These include a provision which would allow investments in SSBICs to qualify for a 50 percent exclusion on capital gains and one which would permit gains from other investments which are reinvested in SSBICs to qualify for a tax deferral. I have attached a copy of a recent Wall Street Journal article dealing with these provisions to my statement.

Private marketing initiatives.—As many Members of this Committee are already aware, NAIC has been involved over the past few years in an important initiative which would raise significant pools of capital for the minority venture capital industry by creating a large fund of funds. The fund of funds will act as an intermediary to raise capital from sources who have not in the past engaged in a significant level of minority venture capital investments. The fund would then place its investment capital with a number of qualified experienced minority venture capital firms.

The new administration has voiced its strong support of minority capital formation. And the SBA is playing an instrumental role in many of the capital formation initiatives I have just mentioned as factors which will significantly increase this industry's demand for leverage. But if the critical technology investment company program is created at the expense of other existing programs, including Specialized SBICs, all of our progress could be jeopardized. After all the work this industry, and its partner in the government, has gone through to get the industry to this point, that same government partner is proposing the creation of an entirely new program, still unclear regarding most of its parameters but clearly lacking incentives

for minority high growth investments, which could hinder our progress in reaching our goals.

We have proven that we can successfully invest in specialized markets and make a return on investment. We have assisted in creating wealth and witnessed the positive impact many of these companies have had on individual communities. We have developed the venture capital talent, the national network, the deal flow, and the institutional and entrepreneurial relationships.

Our ability to continue to attract capital to the industry is critically dependent upon a stable and reliable public/private partnership. The responsibility for creating and maintaining a balanced environment must be shared by the government and private sector, both of whom have invested resources, talent and time.

Mr. Chairman and Members of the Committee, your leadership and support for the Specialized SBIC program is greatly appreciated. Thank you once again for this opportunity to testify.

The CHAIRMAN. Thank you, Mr. Lawhorne.
Mr. Wertheim.

**STATEMENT OF HARVEY WERTHEIM, GENERAL PARTNER,
HARVEST VENTURES, INC., NEW YORK CITY**

Mr. WERTHEIM. Good morning, Mr. Chairman. Thank you for the opportunity to testify today on the contribution of SBICs to the development of technology.

My name is Harvey Wertheim, and I am one of the two founding partners of Harvest Ventures. My firm, based in New York City, manages money in SBIC format, as well as private limited partnerships outside of the SBIC format.

Our total capital base is somewhat in excess of \$100 million, and comes entirely from financial institutions, industrial corporations, and wealthy private individuals. We have clients who have a keen interest in the high-technology sector, and also have clients who are more diversified in their investment needs.

Our introduction to the SBIC program came in the early to mid-1970s, when raising capital was a bit more difficult than it is today. After a year or so of evaluating the SBIC program, several of our clients asked us to apply for a license to operate an SBIC, pursuant to the Small Business Investment Act of 1958.

Between 1975 and 1985, we applied for and were issued a total of six SBIC licenses, which were ultimately managed in a partnership format. These licensees conducted a program of investing primarily in private companies in the technology sector, with no particular geographic concentration. These SBICs were managed by Harvest, and had combined paid-in capital of approximately \$19 million. They had, at maximum, leverage of almost \$23 million.

Taking into account the reinvestment of certain realized profits, these six entities eventually invested \$49 million in 74 portfolio companies, spread throughout the United States. Of the 74 private companies financed by our SBIC group, 52—or approximately 70 percent—were considered high-technology investments. An analysis of these investments show that the products of these companies cover a wide range of technologies that have become particularly important to our country, its citizens, and business in general.

These technologies include, but are not limited to: Laser optics for bar-coding; ultrasound imaging for the medical field; work stations for design engineers; magnetic fluid seal technology, for the manufacturing of semiconductors; custom semiconductor chip manufacturers; super-minicomputer manufacturers; porcelain insulators; water chlorination equipment; high-voltage power supplies; laser scanning inspection systems; frequency synthesizers; array processors; computer graphics; CAD/CAM manufacturing; and artificial heart valves and hip replacement.

Needless to say, the above represents a fairly broad array of technical areas, all of significance in one way or another to each of us. For example, where would we be today without bar-coding technology, which is virtually ubiquitous in our society, extending from the supermarket to naval destroyers and submarines, where every piece of equipment is bar-coded for inventory and control purposes.

It was our group of SBICs which, in 1977, founded and created Symbol Technologies, Bohemia, New York, with an initial investment of \$500,000. This company had 10 employees and a dream, but no completed product to sell. Today, some 16 years later, they are the undisputed world leader in bar-coding technology, with an excess of \$300 million in revenues, 2,200 employees, and a market capitalization of over \$300 million.

The story of Symbol is an enormously important one that underscores the role the SBIC program has had and continues to have, in the formation and development of the private high-tech sector of our country. I might add as well that almost all of the capital that went into Symbol Technologies was from SBICs.

Another important investment was the creation of Advanced Technology Laboratories, Seattle, Washington, in 1979, to design, develop and manufacture ultrasound medical diagnostic equipment. Today, Advanced Technology is a company with more than \$300 million in sales, and employing in excess of 1,000 people, delivering high-quality medical imaging equipment throughout the United States and abroad.

Life without this form of noninvasive imaging systems would, indeed, be very difficult. The data supplied by the ATL equipment is accurate, fast and vital to the specialist or surgeon in a given application.

Naturally, I could go on for hours with stories like this. But in the interests of time, of course, I will not. I would, however, like to summarize for you the overall impact of just our group, the Harvest group, technology program for the approximate 15-year timeframe, from 1976 through 1990.

Of course, all the relevant data is difficult to capture over this long period of time, but we were able to come up with certain information that we think you will find particularly relevant. In the short period available to us, we have developed data on employees for all company's financed, and sales data on just 29 of the 74 companies financed. We have prepared an exhibit, which will be submitted to you with the written testimony as well.

The total program, over the 15-year timeframe, has created small businesses which today generate, in the aggregate, in excess of \$2 billion in sales on an annual basis. That is the Harvest group, only. In addition, 14,000 new jobs were created from these companies. This data is even more impressive when we take into account the fact that the above annual sales and new job creation came from original SBIC capital of only \$19 million, and SBA debentures of \$23 million.

In addition to these accomplishments are two more rather relevant pieces of information. First, we estimate—and it is only an estimate—that at least \$50 million of payroll taxes are paid annually from just these new jobs that were created by us.

Secondly, while we do not have supporting data, we estimate that many of the companies involved have export sales approximating 20 percent of total annual revenues. The impact is, of course, self-explanatory.

I do not for a moment want you to think, or want anybody to think, that we have not encountered failure, frustration and disappointment during these many years. There were, of course, our

share of companies whose products were never completely developed; or if developed, perhaps did not make it to the market. Of course, there were even those that made it to the market but did not survive long-term in the competitive marketplace.

The bottom line, however, is quite relevant. Our SBIC group did successfully fund technology startup companies, brought them to a mature stage, and created significant new jobs. Our story is only one small part of an entire SBIC industry, from which many other accomplishments have come. I am hopeful that the above information is both relevant and helpful to you, in understanding just what has been accomplished in the past, and an indication of what can be accomplished in the future.

With the passage of the Small Business Equity Enhancement Act of 1992, and the interest it has generated both in our firm and in many other firms, it is our opinion, our strong opinion, that the creation of a CTIC program would be duplicative, wasteful, inefficient, and highly confusing to the institutional investor marketplace.

The SBIC program itself has been in place since 1958; and still is not completely understood, even in the most sophisticated business and financial circles. Adding still another government-sponsored funding source would only add to that confusion. We strongly endorse your amendment to S. 4, to integrate CTIC into the SBA.

I have for many years been a very strong supporter of the SBIC program, and have worked as a member of the Executive Committee of the National Association of SBICs, to advance its interests in the business community. I have also served for 1 year as chairman of NASBIC, and therefore I understand the system quite well.

I do not have to tell you about the importance of small business in our country. I wish only to emphasize the role that the SBIC industry has played, and hopefully, with your cooperation, will continue to play in the years to come.

Thank you very much for your time.

[The prepared statement of Mr. Wertheim follows:]

PREPARED STATEMENT OF HARVEY J. WERTHEIM

IMPACT OF SBIC INDUSTRY IN HIGH TECHNOLOGY SECTOR

Good morning Mr. Chairman and Members of the Committee. Thank you for the opportunity to testify today on the contribution of SBICs to the development of technology. My name is Harvey Wertheim and I am one of the two founding partners of Harvest Ventures. Our firm, based in New York City, manages money in the SBIC format as well as private limited partnerships without government SBIC participation. Our total capital base is somewhat in excess of \$100 million and comes entirely from financial institutions, industrial corporations and wealthy, private individuals. We have clients who have a keen interest in the high technology sector and also have clients who are more diversified in their investment needs.

Our introduction to the SBIC program came in the early-to-mid 1970's when raising capital was a bit more difficult than it is today. After a year or so of evaluating the SBIC program, several of our clients asked us to apply for a license to operate an SBIC pursuant to the Small Business Investment Act of 1958. Between 1975 and 1985 we applied for and were issued a total of six SBIC licenses which were ultimately managed in a Partnership format. These licensees conducted a program of investing primarily in private companies in the technology sector with no particular geographic concentration.

These SBIC's were managed by Harvest Ventures and had combined paid in capital of approximately \$19 million and had at the maximum, leverage of almost \$23 million. Taking into account the re-investment of certain realized profits these six

entities eventually invested \$49 million in 74 portfolio companies spread throughout the United States. Of the 74 private companies financed by our SBIC group, 52—or approximately 70 percent—were considered high technology investments. An analysis of these investments show that the products of these companies cover a wide range of technologies that have become particularly important to our country, its citizens and business in general. These technologies include, but are not limited to, laser beam optics for bar coding, ultra sound imaging for the medical field, workstations for design engineers, magnetic fluid seal technology for the manufacturing of semi-conductors, custom semi-conductors chip manufacturers, super mini-computers, porcelain insulators, water chlorination equipment, high voltage power supplies, laser scanning inspection, frequency synthesizers, array processing, computer graphics, CAD, CAM manufacturing and artificial heart valves and hip replacement.

Needless to say the above represents a fairly broad array of technical areas all of significance in one way or another to each of us. For example, where would we be today without bar coding technology which is virtually ubiquitous in our society extending from the super market to naval destroyers and submarines where every piece of equipment is bar coded for inventory and control purposes.

It was our group of SBICs which in 1977 founded and created Symbol Technologies, Bohemia, New York, with an initial investment of \$500,000—with 10 employees and a dream but no completed product to sell. Today, some 16 years later, they are the undisputed world leader in their field with in excess of \$300 million in sales, 2,200 employees and a market capitalization of approximately \$300 million. The story of Symbol is an enormously important one that underscores the role the SBIC program has had and continues to have in the formation and development of the private high tech sector of our country.

Another important investment was the creation of Advanced Technology Laboratories, Seattle, Washington, in 1979 to design, develop and manufacture ultra sound medical diagnostic equipment. Today, Advanced Technology Laboratories is a company with more than #400 million in sales and employing in excess of 1,000 people delivering high quality medical imaging equipment throughout the United States and abroad. Life without this form of non-invasive imaging equipment would indeed be very difficult. The data supplied by the ATL equipment is accurate, fast and vital to the specialist or surgeon in a given application. Naturally, I could go on for hours with similar stories, but of course I will not.

I would however, like to summarize for you the overall impact of the Harvest Group technology program for the approximate 15-year time frame from 1976-90. Of course all the relevant data is difficult to capture over this long a period of time but we were able to come up with certain information that we think you will find relevant. In the short time period available to us, we have developed data on employees for all companies financed and sales data on just 29 of the 74 companies financed. We have prepared an exhibit which should be helpful.

The total program over the 15-year time frame has created small businesses which today generate in the aggregate in excess of \$2 billion dollars in sales on an annual basis. In addition, 14,000 new jobs were created from these companies. This data is even more impressive when we take into account the fact that the above annual sales and new job creation came from original SBIC capital of just \$19 million and SBA debentures of just \$23 million. In addition to these accomplishments are two more rather relevant pieces of information. First, we estimate that at least \$50 million of payroll taxes are paid annually from this new job creation. Secondly, while we do not have supporting data, we estimate that many of the companies involved have export sales approximating 20 percent of total revenues. The impact is of course self explanatory.

Ladies and gentlemen, I do not for a moment want you to think that we have not encountered failure, frustrations and disappointment during these many years. There were of course our share of companies whose products were never completely developed or if developed perhaps did not make it to the market. And of course there were those that made it to the market but did not survive long term within the competitive market.

The bottom line is however relevant. Our SBIC group did successfully fund technology startup companies, brought them to a mature stage and created significant new jobs. Our story is only one small part of an entire SBIC industry from which many other accomplishments have come. I am hopeful that the above information is both relevant and helpful to you in understanding just what has been accomplished in the past and an indication of what can be done in the future.

In our opinion the creation of a CTIC program would be duplicative, wasteful, inefficient and highly confusing to the institutional investor marketplace. The SBIC program has been in place since 1958 and still is not completely understood even in

the most sophisticated business and financial circles. Adding still another government sponsored funding source would only add to that confusion.

I have for many years been a strong supporter of the SBIC program and have worked as a member of the Executive Committee of the National Association of Small Business Investment Companies (NASBIC) to advance its interests in the business community. I have also served for 1 year as chairman of NASBIC and therefore understand the system well.

I don't have to tell you about the importance of small business in our country. I wish only to emphasize the role that the SBIC industry has played and hopefully with your cooperation will continue to play in the years to come.

Thank you very much for your time this morning.

The CHAIRMAN. Thank you, Mr. Wertheim. Do you or Mr. Lawhorne or Mr. Walker, ever feel put upon by the regulations of the SBIC program? The constraints on the way you operate?

Mr. LAWHORNE. Yes.

Mr. WALKER. Absolutely.

Mr. WERTHEIM. Yes, at times.

The CHAIRMAN. Mr. Walker, what do you consider to be the most burdensome?

Mr. WALKER. Luckily, half of them have been fixed in the last regulation change. The size standards were very restrictive, and I find the affiliation standards and association standards also restrictive. So restrictive that I cannot invest with other large non-SBIC venture capitalists in co-financing a deal. Hopefully, we are going to get those regulations changed this year.

The bureaucracy was fairly extraordinary in the kind of things that they require from you, in the audits, and in paperwork. If you do not have the right sign at the right place, in the right door, you will spend half an hour negotiating with the SBA auditor about it. Luckily, I think they have gotten a lot better in the last couple of years, and hopefully, Mr. Bowles will bring a business orientation to the group that has not been there before. I think that is really important.

But in the past, the regulations have been fairly strict; and it has caused a lot of people not to use the program.

Mr. LAWHORNE. Those are similar sentiments, because the same regulations that govern the regular SBICs govern us. So it is the age-old problem that you, rightfully so, want to protect your investment as the government in a license, and hooked up with the private sector. But sometimes, the regs are created with a tendency to over control the enterprise.

One of the significant attributes in company-building, building small businesses, is responsiveness and speed. And sometimes, the process because of certain regulations is cumbersome and slow; and you can miss opportunities, simply because you cannot act quick enough, because of a small quirk that we have found through the years and have been attempting to change.

The CHAIRMAN. Let me ask you this question: You are under a limitation—so Mr. Bowles testified, or Mr. Foren—of a 2½ percent overhead. Is that 2½ percent of sales? Or 2½ percent of what?

Mr. LAWHORNE. He said combined private capital and leverage.

The CHAIRMAN. Do you impose any such restrictions as that on the companies in which you invest?

Mr. LAWHORNE. Absolutely.

Mr. WALKER. I do not do that much.

Mr. LAWHORNE. We have investment agreements that dictate that they cannot just do anything. I would think that, with rare exception, across our side of the house—and I speak both as a practitioner and a participant in a lot of joint financings—we always have something in the financing agreements that limit how much salaries and bonuses and dividends that can be declared. The objective is to build the business, and the decisions that need to be made ought to be done in a way that helps build the business.

Mr. WALKER. As investors, we are in a partnership with these managers, and we are going to make money only when we sell the company. So, we are on the same side as the SBA, when they are putting money in our SBICs, to make money in the end. We do not benefit from anything other than keeping expenses tightly controlled.

The CHAIRMAN. Is it a fair statement—excuse me, Mr. Wertheim?

Mr. WERTHEIM. I was just going to say I agree with Mr. Walker completely, with one additional statement. That is, this is a fair market, and a free market; and to get the best people to run what we consider to be the best companies, you have to pay a market rate. That market rate varies by industry, by expertise and by experience. And in one case you may have a company CEO making \$125,000 a year, and in one case you may have someone making \$185,000 a year. So I believe in the free market, and believe in getting the best people possible.

Now, our arguments to them often are, in an attempt to keep costs down, you will make it in the long-term through your equity ownership, as we will. Nevertheless, he or she has a family to support, and the free market more often than not dictates what these people's salaries and bonuses are. That is my experience.

The CHAIRMAN. Is it a fair statement, because we are talking today about the comparison between SBICs and the so-called provisions in S. 4, that a number of people have gotten rich through pretty risky, high-tech investments, because the chances of high benefits are considerably greater with a high-tech company than they are with the ordinary companies? Is that a fair statement?

Mr. WERTHEIM. That is a fair statement. The return on investment is generally higher, and the risks are general higher.

Mr. WALKER. However, in our portfolio our two most successful investments are retail startups: One is Office Depot; and the other is Gymboree.

The CHAIRMAN. Retail startups? What kind are they?

Mr. WALKER. We have an office supply warehouse concept called Office Depot, where we put money in to set up 20,000-square-foot stores that sell nothing but office supplies. That revolutionized the office supply industry, by providing much cheaper prices to small businesses for basic stationery, basic pens and pencils. The company is now a \$2 billion company, traded on the New York Stock Exchange, and we made over \$25 million on a \$2 million investment. Gymboree is the same kind of story. So it depends on the formula.

The CHAIRMAN. Well, gentlemen, let me say that you have fortified everything that I believe about this program. And I want to also say one other thing.

Everything has not always been lovely in this program. We have had—as you know—big problems. Big losses to the government. And several years ago, when we held hearings on all of those things, it was rather appalling. Just as in the S&L debacle, we have imposed such burdens now on the banks as a result of that, banks cannot make loans to small business anymore. At least they say they cannot, and I am inclined to accept their word for it.

I think the tendency in the SBIC program is to over regulate, because we had some bad apples in that barrel. But most of them fail legitimately, because of the real estate problems they had. When the real estate market in this country really tumbled, we had considerable problems with a lot of SBICs. But I want you to feel free to communicate with the Committee, you and other people of similar stripe, to communicate with this Committee on any concerns you have about over regulation and paperwork. The country is still stifling in it.

Senator Chafee and I are trying to alleviate some of the problems and paperwork burdens that banks have, to at least remove the excuse they have for not making loans to small business. For example, we are raising the asset value on which appraisals have to be made, and things like that; truth-in-lending, if you have got a sophisticated borrower with an experience track record, you do not have to go through all that truth-in-lending stuff with them. It is a terrible paperwork burden, and we are trying to deal with that.

But I thank all three of you very much. Your testimony was splendid.

Our last panel is Ms. Pat Cloherty and Mr. James Parsons. Pat is president-elect of the National Venture Capital Association, president, Patricof & Company Ventures, Inc. of New York; and Mr. Parsons is chairman of the National Association of Small Business Investment Companies.

Pat, you have been wanting your day in court.

STATEMENT OF PATRICIA CLOHERTY, PRESIDENT-ELECT, NATIONAL VENTURE CAPITAL ASSOCIATION; PRESIDENT, PATRICOF & CO. VENTURES, INC., NEW YORK CITY

Ms. CLOHERTY. I am delighted to be here, Mr. Chairman.

The CHAIRMAN. Please proceed.

Ms. CLOHERTY. If I may, I will submit my formal comments for the record, and speak briefly and informally, since this has gone on for some time.

I am here as president-elect of the National Venture Capital Association, also as the Chairman of the Investment Advisory Council that, as you know, studied the performance of the Small Business Investment Company program and recommended the changes that were subsequently enshrined in legislation in the form of the participating preferred security.

But I also am here as president of a large venture capital company, which was itself a venture. That is Patricof & Co. Ventures, started with \$2.5 million under management in 1969, and increased to approximately \$1.5 billion under management in the United States and in five European countries today.

We pioneered in establishing the legal framework for risk capital intermediation in Western Europe, starting in the U.K. in 1975; France, 1976; most recently last year, in Germany.

We have interests in approximately 92 companies in the United States at the moment, and 110 in Western Europe; about half of which in the United States are technology-based, and approximately a third of which in Europe are technology-based.

The portfolios have ranged across the board. We have done extremely well in publishing, from the startup of New York Magazine, American Photographer Magazine, and several other publications, to electronics, health care and so forth.

The Apple Computer deal referred to earlier was, in fact, in our portfolio; which explains my excitement on that subject, when the investment was described as substituting capital for energy and brains, which was not the case.

But in any event, we did have an SBIC as one of our funds starting in 1976, as did many major venture capital companies today. As Mr. Wertheim said, the seventies were a terrible time for raising venture capital from individuals or institutional sources. And the SBIC program at that time was invaluable for many current private venture capital practitioners to continue in business, or to serve their apprenticeships, in fact learning how to manage effective portfolios.

So the program has been invaluable, and today, with the new instrument, it can serve a counter-cyclical purpose since venture capital availability today, largely from institutions, private and public pension funds, has shrunk. It is almost an ideal time for a re-emergence of the SBIC program, along the newly conceived and legislated lines. Now to the program.

The people I represent understand the substance of the proposal for the Commerce Department's technology program. Those of us on the Investment Advisory Council were not surprised by the proposal, inasmuch as the architect of the program participated in our undertaking and in fact the program is duplicated along the lines of the newly-revamped SBIC program, with some major changes, so that its roots are in the deliberations which led to the new SBIC program. So we understand it reasonably well.

Having said that, we oppose it, as unnecessary, duplicative, not centered on rate of return, not centered on financial disciplines, not centered on experience; and it overall reinforces the perception of government and its programs as an undisciplined gravy train.

To get even a little more extreme here, I believe it verges on the Kafkaesque in the following respect: With all of the speeches being given in the Legislative and Executive Branches, about economic growth and job creation and wealth creation, and all of this—

The CHAIRMAN. And their love for small business.

Ms. CLOHERTY. Oh, adoration of small business. It is not at all clear to me why a connection is never made between that policy goal and the single program in government that has the underpinnings, the infrastructure, the managerial experience and, frankly, the respectable history sufficient to warrant being the centerpiece of an economic growth package based on private disciplines, namely the SBIC program.

Perhaps an able person, such as Administrator Bowles, can do that since he is grounded in the realities of small business financing growth and development.

The major premise of this new proposed program, appears to be that the SBICs, existing as privately managed investment entities, do not now invest in technology, specifically, they do not invest in critical technologies. A look at the facts of that, based on a computer run on the investments from 1960 through 1992, does not support that premise. My computer run looked at all SBIC investments for the period in technologies identified as "critical technologies" in the legislation.

I used the Venture Economics industrial classifications because the standard industrial classifications, by and large, are old; and they do not capture emerging technology. So you really cannot tell, if you use normal SIC codes published by the government, which new technologies were backed. In our industry, we used more periodically revised codes that can capture differentiations, for example, in the biotechnology business and in other emerging technologies.

Based on that, and looking at the experience in the program, the results were the following for regular SBICs only. The data do not include investments by the specialized SBICs that Mr. Lawhorne had discussed earlier.

In the aggregate, SBICs invested directly \$1.6 billion in thusly defined critical technologies over the entire period, and brought in an additional \$5.2 billion of non-SBIC private capital, as co-investment; for total investment in those critical technologies over the period of \$6.8 billion.

To put this in perspective, that totals about 10 times the amount current outstanding of government debt in the SBIC program, and the leverage factor overall, you will note, is impressive. Each SBIC dollar leveraged 3.25 in additional private investment capital in critical technologies.

Further, the rate of investing in companies based on critical technologies increased dramatically over time. For the first decade of the SBIC program, that is 1960 to 1969, the total invested was \$62.2 million. And non-SBIC investment, co-investment was \$12.9 million. That increased in the most recent decade, 1980 through 1989, to \$1.3 billion, and \$4.8 billion, respectively. A very dramatic increase in technological investing over a 30-year period.

The average deal size in technology companies increased over the same period from \$300,000 in the decade of the sixties to \$2.5 million in the decade of the eighties.

What was the pattern of aggregate investment in critical technologies? 2.3 percent in biotech; 27 percent in communications; 29 percent in computer-related; 4 percent in consumer-related; and so on. The other two big categories were industrial technology and medical technology, which together comprised about 22 percent of total investment. These results are not time-phased. If you look at the later decade, the biotech portion would be much higher as those sciences evolved.

I will note this: The stub period, 1990 through 1992, evidenced an overall low rate of investment, including in technology; and that has to do with the fact that the venture business reached a nadir, a

cyclical downtown, the emergence from which is only now becoming apparent in the accelerating rate of early-stage investment noted for 1992 in the June 1, Wall Street Journal.

I think the record is reasonably clear, Mr. Chairman. The SBICs over time have invested almost 20 percent of all of the funds ever used in the program, public and private, in what today one defines as critical technologies. They invested in other technologies as well, and I am sure in the sixties they may have invested in what was critical, and in the seventies and in the eighties. And I do not know what "critical" will be in the nineties. But at least 20 percent of what today is deemed "critical" has been historically in their target investments.

I should say as an aside that, our own firm invested in government-defined critical technologies in the early eighties, Gallium arsenide semiconductors, among others.

I should point out the SBICs acted with a financial handicap all this time in making these technological investments. The current pay debentures aren't ideal for backing such early-stage, capital consuming technology-based companies. The new structure of the participating preferred is designed precisely to liberate the SBICs from that financial handicap, and to permit them to expand their rate of investing at the equity level in early-stage technology companies.

That is the empirical side of the SBICs critical technology investing to date. You have heard the anecdotal information on technology investing involving the notable companies: the Crays, the Apples, the Intels, the COMPAQs, and the Symbol Technologies that Mr. Wertheim cited.

A second premise of the proposed Commerce legislation, is that there are great gaps in the market for financing technology companies, including middle market and larger companies. I think that premise bears a little examination, also, and I will only make four comments on that premise.

First, yes, investors are cautious about putting money behind early-stage technology-based companies. Why? Because they risk total loss of capital in so doing. The fear is eminently justified. What are the risks? The technology may not work. Markets may not be able to develop a product that may be made at a price at which anyone is interested in buying. There is a competitive risk. Technologies can obsolesce before products are even finalized much less introduced to markets.

There are regulatory risks, involving multiple rounds of financing, from multiple sources, in order to support technologies through uncertain testing and approval periods, most notably today in the health-related pharmaceutical biotech or medical device area.

Finally, managerial risks are the most profound; the overwhelming risk is that entrepreneurs over time prove inept, unlucky or they get simply tired before the course is run.

On the other hand, investors take the risk of investing in technologically based companies because they can provide extraordinary returns if they succeed. Thus, such companies do get financed very selectively. To spread the risk, people in the venture business, including SBIC managers, diversify risks across their portfolios: win-

ners can offset losers. Furthermore, we stage investments, putting the smallest amount of capital required into a company at each stage, to wash out the next level of risk. \$200,000 builds the prototype and secures patent protection. The next half million goes to a production prototype and testing, and so on.

My second point on the capital gap issue on technology is that there is always vastly more technology around in the United States than can be financed effectively. High-growth companies may be based on intellectual know-how, but their competitive edge ultimately is always in the transformational managers, the entrepreneurs who can take the knowhow and in a timely fashion bring it cost-effectively into the commercial light of day. These people are far scarcer than capital.

Third, the question is always asked about the size of company, measured in net worth, that is the determinant as to when a company can or cannot secure financing to develop new technologies. Three previous of the witnesses have said that size is not the determinant, and I will simply reinforce that size is not the determinant.

Even so, early-stage technology companies are at the toughest stage for raising capital.

For that reason, there is a public policy justification for having an SBIC program that can provide some of that funding at that time, to finance companies at the time in which a small amount of capital has the opportunity for explosive growth in value and job creation. There is no such justification for financing middle-market and larger companies. Such companies should have reached a point of understanding their own profitability formulas thus opening diverse financing options, through banks; other forms of commercial credit or public and private equity markets.

If, when they're mature, larger companies also need government grants and other forms of assistance to develop the technologies that define their future, then they may have problems other than technology problems, such as managerial problems or business issues that capital won't solve.

The SBIC size standards, either the old standard of \$6 million in net worth and \$2 million average earnings, or the new inflation-adjusted recommendation standard of \$18 million and \$6 million, respectively, have posed in my mind no problem in general for investors in emerging technology sector. The companies we back at that stage run losses for many years.

Summing up here, I will say that I think it is demonstrable that the SBICs in fact have financed critical technologies, and that the participating preferred instrument will be a great enabler to permit them to do more.

I believe that there is a danger in compromising the old SBIC structure with that proposed for the Commerce program. The existing program has an internal financial integrity developed over time into the capital structure. Good people from the agency and private industry spent 2 years developing a structure that rewards performance and penalizes failure and abuse.

I think a casual interposition of soft money into that capital structure, for whatever purposes, with no size limitation, will cause problems.

The SBIC program has a record of success. In response to Senator Pressler's question on who else in the world has them, and Mr. Foren responded "Japan," I think this Committee should understand that the program has been an international model, including for Japan.

It is our view at NVCA, that the imperative of the moment is to move the SBIC program to a central position to stimulate entrepreneurial activity in the United States, to fund it, and to move forthwith to harness the kind of private capital that is waiting in the wings for this program to take off, so that the pace of investment, not only in technology but in other growth companies as well begins to accelerate rapidly. Thank you.

[The prepared statement of Ms. Cloherty follows:]

PREPARED STATEMENT OF PATRICIA M. CLOHERTY

INTRODUCTION

Mr. Chairman and Members of the Committee. I'm delighted to be here to participate in these hearings concerning the contribution of the Small Business Administration's (SBAs) financing programs to the development of high technology companies in the United States, with particular reference to those technologies defined as "critical" pursuant to section 603(d) of the National Science and Technology Policy, Organization and Priorities Act of 1976.

I'll focus on the Small Business Investment Company (SBIC) program of SBA and on the private venture capital industry of which it has been part for some 33 years. These were years, I might add, in which the private industry actually emerged, with its own market-based cyclical ups and downs.

The questions I will address are in two areas. First, have SBICs historically backed technologically-based companies? More narrowly, have they backed those thought to be "critical" in current public policy terms? If so, how did it work and what are future prospects for expanded financing? If not, why not?

The second set of issues concerns the factors that make a technologically-based company backable in SBIC, i.e., venture capital terms. Some people assert that the financial markets are at fault, that investors are reluctant to back new technologies. The thinking is that this is a major causal factor in slow emergence of critical technologies. I'm reminded of the inventor who chased me and almost picketed me for failure to back his 25-year, multi-million dollar silicon engine project, despite my demurral that I'd be dead by the time the engine might or might not work, and that I had to "bring home the bacon" sooner than that for our investors and for us.

I am testifying here today president-elect of the National Venture Capital Association (NVCA), and as chairman of SBAs Investment Advisory Council (IAC), appointed in 1991 to review defects in the program and to make recommendations to improve its suitability for making precisely the kind of equity (not debt) financing that are essential to high growth, high tech companies.

There's irony here. Through efforts of the IAC and its counterpart in the House, that effort produced modified financial structure, an equity security for SBICs, that is virtually waiting for funding to dramatically increase the SBICs already considerable contribution to high tech company growth.

In private life, I've been in the venture capital industry for almost 25 years. I am president of Patricof & Co. Ventures, with about \$1.5 billion under management in the United States and in five European countries, where we have pioneered risk capital intermediation for growth, most recently by establishing private risk funds in Germany.

SBICS AND CRITICAL TECHNOLOGIES

Both empirical and anecdotal evidence support the view that SBICs

- have backed companies based on critical technologies;
- have backed them at a generally increasing rate over time;
- have leveraged modest government funding in the process with substantially larger amounts of private capital.

Evidence. We took the Critical Technologies list, which includes specific technologies in materials, manufacturing, information and communications, biotechnology

and life sciences, aeronautics and surface transportation, energy and environment. And we matched it with SBIC investments (and their co-investments with private venture firms) for the period 1960 through 1992. The data are from Venture Economics, which for years was the only, and a reliable, tabulator of investments made by SBICs and later by private venture capitalists. Methodologically, I should note that the industry breakdowns are tabulated using not Standard Industrial Classifications (SIC Codes), which tend to be too old to use to identify emerging technologies, but using the Venture Economics Industrial Codes, which are updated regularly to handle differentiations, for example, in biotechnology and other emergency areas.

The results were the following: (1) In the aggregate, SBICs invested \$1.6 billion in critical technologies over the period and brought in an additional \$5.2 billion of non-SBIC private capital, for a total of \$6.8 billion.

- To put this in perspective, the total is some ten times the amount of government debt outstanding in the program today.
- The leverage factor was great overall. Each SBIC dollar leveraged \$3.25 in additional private investment capital.

(2) The rate of investing in such companies increased dramatically over time, as follows:

Period	Number of investments	SBIC dollars	Non-SBIC dollars
1960-69.....	246	63.2 million	12.9 million
1970-79.....	535	190.9 million	198.9 million
1980-89.....	2,439	1,321.4 million	4,825.5 million

• In other words, over the most recent decade of the program, some \$6 billion was invested in critical technologies, a dramatic increase from the \$76 million in the program's first decade.

• Additionally, one should note that many of the most established private, non-SBIC venture firms, such as my own, "cut their teeth" on SBIC's. We all still deploy substantial amounts of our capital toward the extremely high growth and returns to be deprived from new technologies. This industry comprises a highly efficient, seasoned infrastructure for ferreting out technologies that may work, are well-managed, and merit financing.

(3) The average deal size increased over the same period from \$309,000 to \$2.5 million.

(4) The aggregate industry breakdown for the period (not time-phased for early/later years) was the following:

Industry	Percent
Biotech.....	2.3
Communications.....	27.8
Computer related.....	29.0
Consumer related.....	0.4
Energy.....	0.5
Industrial tech.....	11.4
Medical health.....	9.6
Other electronics.....	8.0
Other tech.....	11.0
Total	100.0

(5) For the 3 years following the investment history outlined in No. 2, before you get too excited about the trend of investing this implies, these three most recent years showed a dramatic downturn in investments—not only in technology but in all industries.

The "stub period" of 1990 through 1992 evidenced a low investment rate in technology in both SBIC and non-SBIC—\$200 million in the aggregate. This reflects a profound cyclical downturn industrywide, as well as the structural problems within the SBIC industry addressed by the new legislation. Recent evidence indicates that investment activity is picking up in 1993, as cited in Udayan Gupta's June 1, article in the Wall Street Journal.

(6) Cyclical in investment is directly related to cycles in fund raising. Simply put, if less money is raised from investors, there is less to invest in growing companies. In the venture capital business, institutional fund managers, of which Patricof & Co. Ventures is one, raised \$1 billion per year over the past 2 years. This is down dramatically from the \$4 billion raised in 1987 alone. Less capital raised means less to invest in growing companies.

One of the strongest points for the use of the new SBIC participating security is the expected boost it will give to offset the troughs in the investment cycle.

Mr. Chairman, the record is reasonably clear. The SBICs alone have invested almost 20 percent of all the funds ever used in the program, public and private, in today's "critical technology" companies, perhaps by prescience. They also backed others not included in today's list.

Most notable, the SBICs acted with a financial handicap all this time, using current pay debentures to back early-stage capital consuming technology-based companies. The new structure (participating preferred) is liberating to SBICs bent on taking technology risk for growth—if it is funded adequately.

You've heard the anecdotal information before. The IAC report submitted to your Committee cited several outstanding technology companies back by SBICs, among them: Cray Research, Apple Computer, Intel, Cellular Communications, Compaq, and Symbol Technologies.

The new SBIC program is an eagerly-awaited tool for seasoned private venture managers, with their own funds at risk beneath the government, to accelerate the pace of such investment.

OTHER ISSUES

Let me briefly touch on three issues relating to the financing of evolving technologies, critical or otherwise.

First, investors indeed are cautious in putting money behind new technologies for the simple reason that such situations present extraordinary risk of loss of capital. The central risks include

- Technology risk: It may not work.
- Market risk: A product may not be developed that can be made in a time, in a configuration and at a price acceptable to end users.
- Competitive risk: Technologies change rapidly and products can be obsolesced before they're completed.
- Regulatory risk: Involving multiple rounds of financing from multiple sources are required to exploit a technology through uncertain testing and approval periods.
- Managerial risk: The overwhelming risk, where entrepreneurs can prove inept, unlucky or they simply tire out before the course is run.

On the other hand, early-stage technology-based companies offer potentially extraordinary returns, so they do get financed, very selectively. To spread risk, most venture investors, including SBIC managers, diversify risks across their portfolios: winners can offset losers. And they stage their investments, putting the smallest amount of capital required in at each stage to wash out the next level of risk.

Second point, there is always vastly more technology around in the United States than can be financed effectively. High growth companies may be based on intellectual know-how in the technological realm, but their competitive edge ultimately is always in the transformational managers—the entrepreneurs—who can take the know-how and in a timely fashion bring it cost-effectively into the commercial light of day. The managerial shortage is far more profound than either the technological or the capital shortage.

Third, you asked about size of company, measured in net worth, that marks the determinant as to when a company can/cannot secure financing to develop new technologies. In general, it can be said that middle-market and mature companies are not candidates for venture capital based on a technology play, because the high

returns aren't there (I'd include companies with \$25 million in revenues as the low end of the middle market.) Such companies may be solid venture investments for other reasons—the terms of purchase are favorable, to open new markets, as an arena, for energized management that can instill new growth, and so forth. But the explosive growth and extraordinary returns in the technology sector have come from pure plays in highly imperfect, if not heretofore non-existent markets, where investors start from a small capital base and early losses, then create large new value rapidly.

The SBIC size standards—the old standard of \$6 million in net worth and \$2 million in average earnings and the new inflation-adjusted standard of \$18 million and \$6 million, respectively, have posed no problem in general to investors in the emerging technology sector. These companies operate in the red (losses) in their early years. For that reason, they are neither bankable nor financeable by institutions or individuals unprepared for total risk of loss. They rarely exceed the net worth or the profitability measures.

The beauty of the SBIC program is that it assists such companies when their financing needs are toughest, where even family and friends have to pitch in with funds. And, as a public policy matter, it is at the time that the success of the company, if achieved, can produce the highest rates of pay-off in new jobs, new wealth, and new competitiveness.

Middle market and larger companies, by contrast, must be assumed to have achieved adulthood and sustained profitability, which vastly expands these companies' financing alternatives from conventional sources, including from internal cash flow, for financing their new directions.

In fact, in size terms, I can't conceive of a rationale for putting government funds to work to back technologies to be developed within mature companies with financing options that should be available to them based on their existing balance sheets and profitability profiles.

CONCLUSION

Summing up, SBICs demonstrably have financed "critical," as well as other technologies. The new participating preferred instrument will be a great enabler to permit them to do more without undue financial risk and without violating their principles of diversification. Early industry interest in the program and willingness to commit private capital appears to be great, as Mr. Parsons of NASBIC testified to the Committee recently. We would urge you not to try to re-invent the wheel by creating a new risk investment approach. Rather, we suggest that you move rapidly to use the tried and true risk capital investment infrastructure available in the SBICs, with the new instrument, to expand the investment rate quickly and efficiently.

The CHAIRMAN. Mr. Parsons.

STATEMENT OF JAMES A. PARSONS, CHAIRMAN, NATIONAL ASSOCIATION OF SMALL BUSINESS INVESTMENT COMPANIES

Mr. PARSONS. Mr. Chairman, I appreciate the opportunity to testify on the important role that SBICs play in financing the development of high technology and the serious questions raised by the technology investment provisions of S. 4.

I am testifying today in my capacity as chairman of the National Association of Small Business Investment Companies which, as you know, is the trade association for the SBIC industry. In my professional life I am general partner of RFE investment partners, a venture capital firm located in New Canaan, Connecticut. We manage several venture funds, including an SBIC with \$10 million in private capital which was licensed in 1980. In that portfolio, similar to the national average, is included roughly 20 to 30 percent of the companies have been high technology, primarily computer, hardware, and software systems kinds of business, and the remainder is nontechnology, basic manufacturing types of businesses.

In the interests of time, the text of my complete statement has been submitted for the record, and I will just cover a few major points in my verbal testimony.

Mr. Chairman, let me get right to the point. Our industry believes very strongly that placing the administration's new investment technology program in S. 4. in the Commerce Department is a major mistake. Instead, this new program should be managed by SBA in conjunction with the currently existing SBIC program.

We have reached this conclusion, as you have and many others, and really, everyone else that has talked today, for several reasons, many of which have been discussed. The first is that SBICs have the experience to select and fund high technology companies that will create the critically important products of the future. Bottom line, SBICs have made significant investments in new technologies through the current SBIC program.

Second, SBA currently has the experienced staff and organization in place to administer this proposed program and effectively deploy funds to be allocated to a new CTIC program.

Third, SBICs have been highly successful in creating jobs.

Fourth, SBIC investments have generated substantial new tax revenues.

Fifth, the newly restructured SBIC program that Pat just talked about will materially increase SBIC investments in technology companies, for all the reasons that have been talked about today.

And, sixth, creation of a duplicate investment program in the Commerce Department is simply wasteful and inefficient.

A few comments on SBIC investments in technology. The SBIC programs track record in providing this long-term patient capital, as has been talked about today, is really impressive. On the average, over the past 5 years, 20 percent, roughly, of all SBIC investments have been in areas that the Federal Government is now calling national critical technologies.

The CHAIRMAN. Now, wait just a minute, Mr. Parsons, on that point. Did you say 20 percent?

Mr. PARSONS. Roughly 20 percent, that is right.

The CHAIRMAN. In critical technologies?

Mr. PARSONS. In the areas as Pat described, the SIC codes, et cetera. The areas that the Federal Government is currently calling critical technologies. Roughly 20 percent of what SBICs have invested is covered in those same SIC codes.

The CHAIRMAN. I just handed my staff a note before I interrupted you asking what the definition of critical technology was. They handed me a note back saying it is a list created by the Commerce Department.

So there is no magic definition.

Mr. PARSONS. It is whatever the Commerce Department determines at the time is the national critical technologies, which can change over time.

The CHAIRMAN. Go ahead.

Mr. PARSONS. Companies described by Jeff Walker and Harvey Wertheim are excellent examples of how the SBIC program has provided patient capital to higher risk technology companies.

To emphasize this point, I have also submitted three additional items with my testimony. The first is a letter from John Whaley

who is a partner in Northwest Venture Partners, an SBIC located in Minneapolis. Over two-thirds of their \$300 million in SBIC investments over the past 30 years have been in high technology industries, and their investments were crucial to the survival and development of these high tech companies.

His letter describes eight specific investments of their SBIC that the SBIC has made in outstanding technology based small companies in such fields as biotechnology, nuclear waste, technological medical products, satellite rockets, and computers. As the facts indicate, these investments have produced enormous benefits to the economy in terms of both technological advances and employment.

The second item I have submitted is a short list of some 10 high tech companies in which SBICs have made investments that have become star performers in their field. These companies are engaged in a series of different technologies such as fiber optics, integrated circuits, biotechnology, satellite transmissions, and supercomputers, and they include such leading companies as Intel, Compaq computer, Symbol Technologies which Mr. Wertheim referred to, and Apple Computer.

The third item is a list drawn from a compilation of investments made by a small group of SBICs that we put together in 1991. We had a national association annual meeting where we asked people to list companies in their portfolio as a way of sharing deals and helping those companies get funding. Just from that list, a list of 65 small companies were generated engaged in a wide spectrum of advanced technologies, and we have included the list of those companies and the areas that they operate in just to give you a feel for the broad spectrum of technologies involved. I think these materials give the Committee more solid evidence that SBICs have been a substantial player in making investments in high-risk technology ventures.

On the job creation front, SBIC investments in small growth companies have been a major factor in job creation. During the past 3 decades SBICs have invested over \$9 billion in more than 83,000 small businesses, and we have recently completed a study of the job creation impact of these investment. It is really compelling, and I have attached that to the report. We think that there are roughly over 500,000 jobs have been created, new jobs, have been created from the SBIC program, and frankly, I think that we are being conservative.

Also, in the study you will see that the actual government's cost of creating a new permanent job through the SBIC program historically has been roughly \$875.

In terms of tax revenues, SBIC investments have produced substantial new tax revenues for the Federal Government. I have enclosed for the record a compilation on 25 of the leading SBIC investments. As the listing indicates, these companies alone have produced over \$4 billion in new tax income, and this amount of Federal income far exceeds all of the losses in the program over its 35-year period. Clearly, the SBIC program has been a win-win investment for the government.

Mr. Chairman, another key factor that argues for managing the proposed program within the existing SBIC program, and it was referred to by Ms. Cloherty, is the fact that the legislation proposes a

funding process that duplicates the funding mechanisms contained in last year's SBIC legislation. Setting up a new mirror image investment program in the Commerce Department is simply a formula for the creation of wasteful and inefficient duplication, as you said in your opening remarks.

SBA already has the organization and staff to manage the investment program. We do not understand why it makes sense to create a duplicative program that will involve the expenditure of millions of additional dollars. It really seems incredible to me that at the time the administration is proposing to "reinvent" government to be more efficient and effective, we are wrestling with serious budget shortfalls, pending tax increases, and scarce Federal resources, that Congress would pass this kind of legislation—costly, inefficient, duplication-type of legislation.

In conclusion, Mr. Chairman, the SBIC industry strongly believes that the creation of a duplicate investment program in the Commerce Department is, at worst, a classic example of the typical games that makes the average American voter angry with Washington, and at best, a horrible example of how the Federal Government can create overlapping and duplicate programs.

As a taxpayer, I am appalled at the potential waste of scarce taxpayer dollars that would be involved if this proposal becomes a reality. As a business person, I am very discouraged that Congress might actually create such wasteful and inefficient duplication.

As chairman of the SBIC Industry Association, I am very concerned about the confusion this duplicate program would cause in the capital markets, not only for fundraising, but also it would create—it would take away from the discipline, as Ms. Cloherty talked about, in rewarding the people that really invest in and create successful companies.

Consequently, we strongly urge you to convince the full Senate to support your amendment to S. 4.

Mr. Chairman, thank you for the opportunity to testify, and I would be pleased to answer any questions.

[The prepared statement of Mr. Parsons follows:]

PREPARED STATEMENT OF JAMES A. PARSONS

Mr. Chairman and Members of the Committee: I appreciate the opportunity to testify today on the important role SBICs play in financing the development of high technology, and the serious questions raised by the technology investment provisions of S. 4.

I am testifying today in my capacity as chairman of the National Association of Small Business Investment Companies (NASBIC), which is the national trade association for the SBIC industry.

In my professional life, I am a general partner of RFE Investment Partners, a venture capital firm located in New Canaan, CT. RFE manages several venture funds, including an SBIC with \$10 million of private capital which was licensed in 1980.

In the interest of time, a text of my complete statement has been submitted for the record, and I will cover only the major points in my verbal testimony.

THE MAJOR ISSUE

Let me get right to the heart of the matter.

Section 324 of S. 4 proposes to create a new federally-supported "Critical Technology Investment Program" under which the Commerce Department would license, regulate and fund privately managed investment companies that would invest in businesses engaged in the development of new technologies.

We believe very strongly that placing the administration of this new technology investment program in the Commerce Department is a major mistake.

Instead, this new program should be managed by SBA in conjunction with the currently existing SBIC program. We've reached this conclusion for several reasons. I'll elaborate on each, but let me summarize them briefly:

1. SBICs have made significant investments in new technologies, and they have the experience to select and fund high technology companies that will create the critically important products of the future.
2. SBA currently has the experienced staff and organization in place to administer this proposed program and to effectively deploy funds to be allocated to this new CTIC program.
3. SBICs have been highly successful at creating jobs.
4. SBIC investments have generated substantial new tax revenues.
5. The newly re-structured SBIC program will materially increase SBIC investments in technology, and
6. Creation of a duplicate investment program in Commerce is wasteful and inefficient.

SBIC INVESTMENTS IN TECHNOLOGY

The experience of our industry tells me that a significant majority of innovative breakthroughs in high-technology are developed by small growth firms, not big business. These are the entrepreneurs that can move quickly to develop new products and exploit market niches far faster than large companies that are burdened by bureaucracy and layers of management.

The SBIC industry's track record in providing long-term patient capital for these innovative growth companies is impressive, even without special incentives to invest in high-tech industries. On average over the past 5 years, some 20 percent of all SBIC invested dollars and 23 percent of the number of SBIC investments have been in the categories defined by the Federal Government as "national critical technologies."

The companies described by Jeff Walker and Harvey Wertheim are excellent examples of how the SBIC program has provided patient capital to higher risk technology ventures.

To emphasize this point, I've also submitted three additional items with my testimony.

The first is a letter from John Whaley, who is a partner in Norwest Venture Partners, an SBIC located in Minneapolis, MN. As John's letter points out, over two-thirds of their SBICs investments over the past 30 years have been in high technology industries, and their investments were crucial to the high-tech companies survival and development. His letter describes 8 specific investments their SBIC has made in outstanding technology-based small businesses in such fields as biotechnology, nuclear waste, technological medical products, satellite rockets and computers. As the facts indicate, these investments have produced enormous benefits to the economy in terms of both technological advances and employment.

The second is a short-list of some 15 high-tech companies in which SBICs have made investments that have become star performers in their fields. These companies are engaged in a series of different technologies such as fiber optics, integrated circuits, biotechnology, satellite transmissions and super computers. And, they include such leading companies as Intel Corp., Compaq Computer Corp., Symbol Technologies, Inc., Orbital Sciences Corp. and Apple Computer.

The third item is a list drawn from a compilation of investments made by a small group of SBICs that we put together in 1991 for totally different reasons. This listing includes SBIC investments in 65 small companies engaged in a wide spectrum of advanced technologies, and should provide the Committee with a feel for the broad scope and diversity of technology investments that SBICs make.

In summary, these materials will give the Committee solid evidence that SBICs have been substantial players in making investments in high risk technology ventures.

SBA DELIVERY SYSTEM IN PLACE

SBA currently has a fully-staffed delivery system in place to manage and fund the proposed new CTIC program.

The Investment Division of SBA is dedicated exclusively to the SBIC program and has 35 years experience in managing the various functions involved in the program. This is a highly complicated process which includes the licensing, funding, examina-

tion and regulation of participating companies; and, when necessary, enforcement actions and liquidation of assets.

SBA's Investment Division has a staffing contingent of 93 trained individuals with experience in licensing standards, investment policies, financial and portfolio analysis, funding, and regulatory examinations; backed up by experienced legal, administrative, operations and other specialized support personnel.

In addition, SBA has recently developed a very efficient funding system for the SBIC industry through the public sale of guaranteed SBIC securities in the capital markets, utilizing the expertise of the investment banking community. Over the past 7 years this system has very effectively provided over \$650 million in funding for the SBIC industry.

It seems only logical that the government should use this currently existing, efficient system to manage the new CTIC program. The exercise of re-creating and staffing a costly, duplicate operation with no experience in the Commerce Department to manage the same function makes no sense.

JOB CREATION

SBIC investments in small growth companies have also been a major factor in the job creation process, and many of these new jobs have been created in high technology industries.

Over the past 3 decades SBICs have invested \$9.1 billion in over 83,300 small businesses, and we have recently completed a study of the job creation impact of these investments.

The findings are quite striking. In summary, SBIC investments have produced an outstanding record of cost-efficient job creation:

- One new job is created for every SBIC investment of \$17,000.
- The government's portion of that investment is \$6,500.
- The government's actual cost to create a new job, based on the historical subsidy rate for the SBIC program, is only \$875.

I have enclosed a copy of our study on job creation for the record.

NEW TAX REVENUES

SBIC investments have also produced substantial new tax revenues for the Federal Government. While we do not have a tally of the total new tax income produced by the program, we have assembled data that more than tells the story.

I have enclosed for the record a compilation of information on 25 of the leading SBIC investments. As this listing indicates, these companies alone have produced over \$4.0 billion in new tax revenues for the Federal Government. This amount of federal income far exceeds all of the losses the program has incurred over its 35-year history.

Clearly, the SBIC program has been a win-win investment for the government.

THE NEWLY RE-STRUCTURED SBIC PROGRAM

Mr. Chairman, another key factor that argues for managing the CTIC program with the existing SBIC program is the new legislation passed by Congress last year.

As you and Members of this Committee know, the Small Business Equity Enhancement Act of 1992 made significant changes to re-structure and improve the SBIC program.

I won't go into the details of those changes, except to say that the new SBIC program is now a much more attractive vehicle for venture investing and will automatically encourage greater investment in early stage high technology companies.

With the regulations governing this exciting new program nearly complete, literally hundreds of highly qualified groups are considering the formation of new SBICs and numerous institutional and other private investors are poised to invest multiple millions of dollars into the program.

The re-structured SBIC program will be a very important source of long-term capital for small, emerging technology companies. The program has been redesigned to provide exactly the kind of capital technology companies need—patient capital in the form of equity investments.

The new program will re-direct patient capital to start-ups and companies developing new technologies. When this development is coupled with the pending increase in the size standard for qualified SBIC investments, the new program should significantly increase the overall percentage of SBIC investments in a variety of technology based industries.

COUNTER-PRODUCTIVE DUPLICATION AND WASTE

In addition to the programmatic arguments for melding the proposed "Critical Technology Investment Companies" into the existing SBIC program, there are also some compelling common sense arguments.

It seems obvious to us that the process of setting up a new, mirror-image investment program in the Commerce Department is simply a formula for the creation of wasteful and inefficient duplication at the expense of the taxpayers. SBA already has the organization, staff and system in place to manage the investment program. Why create a duplicative system that will involve the expenditure of millions of additional tax dollars?

It seems incredulous that at the very time the Administration is proposing to "re-invent" government to be more efficient and effective, and we're wrestling with serious budget shortfalls, pending tax increases and scarce federal resources, Congress would pass costly, inefficient legislation which duplicates an existing program.

BUMPERS-PRESSLER AMENDMENT

Consequently, the SBIC industry strongly supports the proposal by Senators Bumpers and Pressler to amend S. 4 and merge the proposed "Critical Technology Investment Program" into the existing SBIC program at SBA.

We do have several suggested technical changes to the amendment which we believe would improve the program. They are:

1. We recommend that the profit participation be reduced to zero for the new CTICs, instead of 50 percent of the profit rate for other SBICs as proposed by the amendment. We believe this degree of incentive is necessary to offset the added concentration of risk inherent in these new investment companies because of their exclusive dedication to technology investments.

2. We believe the new CTICs should all be "for profit" investment companies. The amendment would allow a CTIC to be formed as a "non-profit" entity. We believe this language was inadvertently taken from the authorizing language for Specialized SBICs, but is not applicable to the new CTICs.

3. Rather than creating a whole new class of specialized technology investment companies, we would prefer the provision of an incentive for all SBICs to make technology investments. We believe this approach has the added value of maximizing the impact on technology investments through the participation of more SBICs. It also would reduce the risk for the investment companies and the government caused by forcing these new investment companies to narrowly concentrate their investments solely in high-risk technology areas.

4. Finally, we would recommend that the proposal to create a fund to make the program self-sustaining in Section (g) of the amendment be expanded to cover all SBICs.

CONCLUSION

In conclusion, we believe the creation of a duplicate investment program in the Commerce Department is:

- At worst, a classic example of the type of political games that makes the average American voter angry with Washington.
- At best, a horrible example of how the Federal Government can create overlapping and duplicative programs.

As a taxpayer, I'm appalled at the potential waste of scarce taxpayer dollars that would be involved if this proposal becomes a reality.

As a businessman, I'm very discouraged that Congress might actually create such wasteful and inefficient duplication.

As chairman of the SBIC industry association, I'm very concerned about the confusion this duplicate program would cause in the capital markets, and the negative impact it could have on the SBIC program.

Consequently, we strongly urge you to convince the full Senate to support your amendment to S. 4.

I will be pleased to answer any questions the Committee may have.

TECHNOLOGY COMPANY INVESTMENTS BY SBICs

(SAMPLE OF RECENT INVESTMENTS)

Advanced Polymer Systems, Inc.—Develops and markets polymer-based delivery systems for the controlled release of active ingredients and therapeutic agents.

Agipro Biosciences, Inc.—Grain crop seed hybridization technology based upon induction of asexual male sterility.

Alamo Technology, Inc.—Electronics engineering specializing in aerospace and weapon systems.

Applied Extrusion Technologies, Inc.—Manufacturer of specialty polyethylene and polypropylene products.

Applied Intelligent Systems—Designer and manufacturer of parallel processors for machine vision industry.

Applied Spectrum Inc.—Manufacturer and marketer of telephone security and data/voice multiplexers and other telecommunications equipment.

Astro Metallurgical—Manufacturer of fabricated and wire products made of titanium and other specialty alloys.

Automation Intelligence, Inc.—Designs and manufactures computer-integrated manufacturing systems products, including applications of metal chipforming, numerical parts control software, and computer control systems.

Benzing Technologies, Inc.—Develops, manufactures and markets semiconductor processing equipment based on innovative applications of reactive ionized gas technology.

Berkeley Quartz Labs.—Designs and manufactures quartzware for the semi-conductor industry.

Biomune, Inc.—Manufactures and markets biological vaccine products for the animal health and veterinary industry.

Blueline, Inc.—Develops, acquires, markets and licenses IBM and IBM compatible mainframe productivity enhancement software.

Calera Recognition Systems—Develops optical character recognition systems which scan, recognize, and process text in omni-font character recognition. Applications include building of CD-ROM data bases, image management; and information archival and retrieval.

Ceramic Research—Manufactures new, state-of-the-art composite materials.

Confidential—Manufacturer of high quality specialty acrylics for medical, aerospace, and electronics applications.

Credence Systems Corporation—Manufacturer of application-specific integrated circuits, programmable logic devices, and micro controllers and chip sets.

Data/Ware Development—Produces test equipment and interfaces for input/output channels, and optical disk storage systems for IBM and IBM compatible mainframes.

DET Holdings Corporation—Manufacturer and marketer of equipment for producing compound semiconductor wafers.

Dynaco Corporation—Manufactures advanced, fine-line flexible printed circuits.

Electronic Designs, Inc.—Produces high-density, high-reliability Static Random Access Memory circuits.

Emerging Technology, Inc.—Developer and marketer of word processing software for microcomputers.

Extral Corporation—Manufacturer and marketer of analytical mass spectrometers, which measure the chemical elements and compounds in substances, and specialized high performance magnetic and surface science instrumentation.

Flightline Electronics—Designer and manufacturer of instruments utilized in submarine detection, guidance and airborne testing systems.

Gilead Sciences—Designer and manufacturer of a new class of human therapeutics utilizing a technology known as "genetic code blockers" which block a disease at the DNA or RNA level. Gilead's development program is focused on drugs for cardio-vascular disease, viral infections and cancer.

Hancock Software, Inc.—Produces system utility software for VAX/VMS computers.

Infortext Systems, Inc.—Designs, manufactures and markets a line of microprocessor based copies control call accounting and telecommunications management systems.

Intec Corp.—Manufactures the most technologically advanced laser-based inspection and process control systems available to the plastic, steel, paper and other continuous material industries.

IXYS Corporation—Develops, manufactures and markets high voltage integrated circuits for the power conversion and motion control markets. These devices combine digital or linear logic with high voltage or high current switching capacity in a hybrid or monolithic package.

J-TEC Associates, Inc.—A full service electronics design and manufacturer with capabilities ranging from board design and stuffing to the design and manufacture of integrated circuitry.

LatroMed Incorporated—Develops systems and products for tissue growth stimulation through electromagnetic ion migration.

Membrex, Inc.—Produces high performance ultrafiltration membranes.

Micro Linear Corporation—Develops linear circuit designs that combine software tools with a full range of process technologies to create a family of customized linear and linear/digital LSI products for systems designers in such fields as data conversion, telecommunications and computer peripherals. Micro Linear also provides custom chip development and manufacturing for the semiconductor industry.

Micro-Precision Tech, Inc.—Designer and manufacturer of microelectronic circuits and products.

Microdynamics, Inc.—Specializes in microprocessor based production design technology.

MicroTouch Systems, Inc.—Manufactures touch-sensitive screens, monitors and peripheral devices for personal computers.

Netcor, Inc.—Manufacturer of online connectivity systems which interface computer and communications products in enterprise networks.

Netlink, Inc.—Manufacturer and distributor of SNA data communications controllers.

Nonvolatile Electronics, Inc.—Produces nonvolatile memory device technology products.

Norian Corporation—Develops bio materials such as unique formulations of calcium phosphate minerals to be used as therapeutic bone substitutes in orthopedic and dental applications.

Numonics Corporation—Manufacturer and marketer of electronic and electromechanical digitizers and plotters.

Peak Systems, Inc.—Produces rapid thermal (chemical vapor) processing systems specifically designed for the high-volume semiconductor manufacturing market as semiconductor geometrics shrink.

Performance Controls, Inc.—Designs and manufactures high-performance electronic servo-amplifiers, which provide precise electrical controls used in aerospace, defense, and industrial applications.

Performance Semiconductor Corporation—Develops, manufactures and markets high-performance static memories, logic and microprocessor components for the military, computer and telecommunications markets.

Photometrics, Ltd.—Manufactures high resolution CCDs, cameras, and digital processing systems serving the scientific and medical diagnostic industries.

Promega Corporation—Manufactures molecular biological and probe/diagnostic products.

Pulse Engineering—Designs and produces electronic components, including pulse transformers, delay lines, switcher magnetics, filters, and microcircuit subassemblies.

Rocky Mountain Inst. Co.—Manufacturer of high-tech optical components, assemblies, and coatings.

Rugged Digital Systems, Inc.—Manufactures ruggedized computers for use under severe environmental conditions.

S.I. Tech—Manufacturer and marketer of fiber optic modems, multiplexers, and transmitters.

Suprex Corp.—Manufactures supercritical fluid chromatography and extraction systems.

SyQuest Technology—Manufactures removable Winchester hard disk drives and cartridges.

TA Instruments, Inc.—Developer, designer and manufacturer of thermal analysis instruments.

Tartan Laboratories, Inc.—Designer and marketer of computer compilers.

Thermoscan, Inc.—Developer, manufacturer and distributor of patented infrared tympanic thermometers for measuring human body temperature.

Topometrix Corporation—Manufactures advanced scanning probe microscopy for commercial and scientific applications.

Traveling Software, Inc.—Designs and manufactures laptop computer software, hardware and related products.

U.S. Robotics, Inc.—Manufactures robotics modems.

Veeco Instruments, Inc.—Producer of a broad line of quality control test instrumentation for applications in semiconductor production, aerospace and optics manufacturing, material research and high energy physics.

Vicom Systems, Inc.—Designs and produces image processing equipment and systems.

Viewlogic Systems, Inc.—Develops computer aided engineering software.

Vivid Technology, Inc.—Manufactures X-ray security systems to identify plastic explosives and other terrorist devices.

Voicetek Corporation—Manufactures interactive voice response computer hardware and software.

Voxel Corporation—Produces systems for holographic medical imaging from digital data output of CAT and MRI scans.

Wavetracer—Manufacturer of parallel processing super computers.

Xinix, Inc.—Manufacturer of sensors and instruments for various thin-film processes.

JOB CREATION AND SBICs

A fundamental precept of President Clinton's economic recovery program is investment initiatives to create jobs

"... the only way to lay the foundation for renewed American prosperity is to spur investment. New investment will create jobs, putting people back to work today, and will provide the productive equipment that we need to compete in the global economy.

PRESIDENT WILLIAM J. CLINTON,
A Vision of Change for America,
February 17, 1993.

INTRODUCTION

Small businesses have traditionally been the engine of economic growth. These companies comprise over 95 percent of all businesses in the United States. Small Business Investment Companies (SBICs) provide small businesses with capital, strategic advice and management assistance in order to enable these small companies to grow and to enhance their likelihood of long term success.

The Small Business Investment Company program was established in 1958 to help fill the "equity gap", which Congress considered a serious threat to the vitality of our free enterprise economy. This program created a partnership between the Federal Government and the private sector to substantially improve the flow of long-term, risk capital to small businesses.

Under the program, the U.S. Small Business Administration (SBA) licenses private sector corporations and partnerships to provide financing and management assistance to small businesses in the U.S. long term debt guaranteed by SBA (leverage) is made available to SBICs to supplement the private capital they raise, increasing the pool of funds SBICs can invest in small business. An SBIC's private capital is exposed to 100 percent of any potential loss prior to any risk of loss to the federally guaranteed debt.

The SBIC program has been highly successful in meeting its objective of stimulating economic growth and creating jobs over the past 3 decades. This growth has been accomplished through SBIC investments of \$9.1 billion in over 83,300 small business concerns. These SBIC financings have resulted in the creation of a substantial number of permanent jobs during the 35 year history of the SBIC program at a very low per job cost to the Federal Government.

JOB CREATION BY SMALL BUSINESS

Small business is the greatest generator of new jobs in the United States, and SBIC-backed companies are the most rapidly growing small firms in this sector of the economy.

Historically, the number of new jobs created by small businesses significantly exceeds the number of jobs created by large companies. In normal business cycles, small business creates 60-65 percent of all the new jobs created in the economy.¹

Between 1987 and 1992, with the downsizing of many large American businesses, the job creation performance of small business was extraordinary. During this period small growth firms created 5.8 million net new jobs, while big business lost a

¹ The State of Small Business: A Report of the President (1986-90 editions). Other similar studies include: A Federal Trade Commission analysis for the period of 1969 through 1976, showing no new net jobs were created by the Fortune 1,000 companies; and a study by Massachusetts Institute of Technology that showed of 5.6 million companies surveyed two thirds of the net new jobs created between 1969 and 1976 were created by small, growth oriented firms. See also, The Facts About Small Business, SBA (April, 1993).

net of over 2.3 million jobs. In short, over the last 6 years small business created all of the net new jobs in the U.S. economy.²

ACCELERATED JOB CREATION BY SBIC-BACKED SMALL BUSINESS

Within this context, SBIC-backed small businesses have even greater, proven job creation performance than small businesses generally. A Deloitte, Haskins and Sells (Deloitte & Touche) study³ concluded that companies financed by SBICs have generated more than 10 times the employment growth of all other small businesses. This is a result of the fact that SBICs intentionally invest primarily in startups and other small companies expected to have high growth rates.

Support for these conclusions can also be found in a recent economic impact study completed by Coopers & Lybrand for the National Venture Capital Association.⁴ The study found that 428 venture capital (and SBIC) financed companies created a new increase of 92,500 highly skilled U.S. jobs between 1985 and 1991, an average of 216 new jobs per company. The average net job growth increase per company was 18 percent compared to a net decrease of 2 percent for Fortune 500 companies over the same period.

Definitive studies have also demonstrated the low governmental cost of creating a permanent job through the SBIC program. The Deloitte & Touche Study concluded that \$17,000⁵ invested by an SBIC into a small business creates one permanent new job.

In order to determine the actual direct governmental cost of this new job, it is necessary to compute the government's actual per dollar cost of its share of this \$17,000 investment. Over the past 10 years the average outstanding amount of SBA guaranteed leverage was \$847 million. During the same period the average outstanding amount of private capital invested in SBICs totaled \$1.490 billion. The resulting average ratio of SBA guaranteed leverage to private capital is .568 to 1. At this ratio (56.8 cents for every \$1.568 invested), the government share (represented by government guaranteed leverage) of each SBIC dollar invested in a small firm is 36 percent. Consequently, for each \$17,000 invested by an SBIC to create a job, the government's share (\$17,000 x 36 percent) is \$6,120.

Historically, the government's actual cost for each \$1 of SBIC leverage guaranteed by SBA has been 14.29 cents (or 14.29 percent).⁶ Therefore, the government's \$6,120 share of the amount an SBIC invests to create a job multiplied by the government's per dollar cost of 14.29 percent produces a historical government cost to create a new job through the SBIC program of \$875 per job. This level of cost is significantly below the published per job cost of most other job creation programs sponsored by the Federal Government.

RECENT EVIDENCE OF LOW-COST JOB CREATION BY SBICS

A recent study of a representative group of SBIC portfolio company investments confirmed the remarkable job creation capacity of SBIC investments in small growth firms.⁷ The study covered SBIC investments of \$544 million in 442 small growth firms over the last 10 years.

During this period, these small businesses created a net increase of 49,678 new jobs for the U.S. economy. The creation of each new job, therefore, involved an SBIC investment of only \$11,000. (While this is substantially less than the \$17,000 investment per job used in the above analysis, we have chosen to use the more conservative figure to compute the government cost per job.)

² Who's Creating Jobs?, Cogenetics, Inc. (May, 1993). See also The State of Small Business: A Report of the President (1992).

³ "Summary of the Economic Impact of the Small Business Investment Company Program" by Deloitte Haskins & Sells, 1980. This study surveyed the job growth realized by all companies financed by SBICs from 1958 to 1979 compared to job growth by all small companies as reported by a combination of the Federal Trade Commission Quarterly Report of Manufacturing Companies, U.S. Bureau of Census, and Arthur D. Little, Inc. estimates. In addition to job growth, the study compared the average annual growth of all sales, profits, assets and federal corporate taxes among small businesses to those of SBIC financed businesses. Throughout the period measured, SBIC financed businesses demonstrated a superior growth rate in all categories studies compared to that of all other small businesses.

⁴ "Third Annual Economic Impact of Venture Capital Study" by Coopers and Lybrand and Venture Economics.

⁵ \$6,463 cost per job in 1980 adjusted for inflation to the present.

⁶ Office of Management and Budget (OMB) budget scoring model for the SBIC program, 1992.

⁷ NASBIC survey of thirteen randomly selected SBICs of different sizes, from various geographic locations and having different investment strategies (May, 1993).

AN EFFICIENT, HIGH-VISIBILITY INVESTMENT INITIATIVE

In today's environment of budget deficits government investment initiatives designed to create jobs must be highly efficient and produce the greatest numbers of permanent jobs at the lowest cost.

The SBIC program has a 35-year history of creating permanent jobs at extraordinarily low cost to the government. Despite the compelling low cost job creation success of the SBIC program, utilization of the SBIC program was deemphasized substantially during the past 10 years. The number of operating SBICs was also sharply reduced during this period.

In order to revitalize the SBIC program and thereby benefit from this efficient engine of job growth, Congress passed legislation in late 1992 to restructure and improve the program (the Small Business Equity Enhancement Act of 1992) P.L. 102-366). With the regulations governing this exciting new program nearly complete, numerous institutional and other private investors are poised to invest millions of dollars into new SBICs.

The new SBIC program can be a fresh, high-visibility initiative to showcase President Clinton's commitment to small business, job creation and investment in America's future growth.

CONCLUSION

The SBIC program alone can go a long way to help the President meet his job creation goals. And, it can be launched with a modest investment of government funds.

Appropriations of only \$354-million over 5 years would fully fund the entire \$3.0-billion in SBIC guarantees authorized by Congress. Based on the proven job generation capability of the SBIC program, this level of funding would ultimately create over 350,000 permanent new jobs.

For FY 1994, the SBIC industry is requesting an appropriation of \$36.4 million.⁸ This level of funding will create 25,000 new jobs, and it represents a modest increase of \$10.6 million over the Administration's request for SBIC funding.

The CHAIRMAN. Thank you, Mr. Parsons.

You know, when we talk about these successful SBIC companies we always use the same one: Intel, Apple, Federal Express, Compaq, and so on. And of course, one of the most compelling arguments that we can make on those is how much taxes. For example, last year that typical list of 10 companies—it was 1990 or 1991, the last year we had complete figures—they paid, those 10 companies, paid a \$1,700,000,000 in taxes to the Federal Government. I am talking about corporate income tax.

I do not know what the total SBA budget is. My guess is that it is probably over twice what the SBA costs a year. But that does not tell anything like the whole story because, for example, Federal Express has 24,000 employees in Memphis alone. And you think of all the taxes paid by all the employees of all these companies.

Then you alluded to something that Patty Forbes, a staffer here gave me recently on, I believe, the 7(a) program that showed the 7(a) program, the way we score it, actually generates a job for every \$780 we put in it, something like that. And you point out that SBICs create jobs for \$17,000, for SBIC dollar invested, but about \$800 plus per government dollar subsidy.

It is a remarkable thing, is it not, how difficult it is to get people's attention to something as dramatic as that is. You know, one of the things that has just blown my mind since I have been in the Senate, you can say the most unbelievable thing, that is true—and

⁸ \$21-million to support SBA guarantees for \$150 million of participating securities at a subsidy rate of 14 percent; and \$15.4 million to support SBA guarantees of \$100 million for current pay debentures at a subsidy rate of 15.4 percent.

it is like pouring water off a duck's back. I mean, nobody seems to care, it is as though they did not understand what you said.

I have been fighting for reform of the mining laws of this country for 5 years. And all I ever got was just a ho hum. I have always sort of prided myself on my ability as a trial lawyer. I was a trial lawyer and I always thought I was a pretty good country stump speaker and could get people's attention and make them pay attention. You get out there and say do you realize the government has sold off over \$3 million of land for \$2.50 an acre.

Hmm. Is that true?

Ms. CLOHERTY. Where can I get some?

The CHAIRMAN. And that they just sold 2,000 acres of land to a company that has \$35 billion worth of palladium and platinum on it.

Ho hum.

To me, that is the sort of thing that just ought to have people standing on their heads.

This year, suddenly, simply because Bruce Babbitt is Secretary and Bill Clinton is President, people are beginning to pay attention. And it is like I always say, it is the draft horses around here.

Something I ought not to say, but sometimes I go back home and I make speeches and say do you know, you let them change 15 Members of the U.S. Senate and I promise you the government will work.

[Laughter.]

The CHAIRMAN. And it will work very well. We just never seem to achieve that critical mass.

I will tell you something else, the guys you see on evening television are not the ones who make the show go. It is guys like Tom Daschle, whom the ordinary guy in my State has never heard of, or like Terry Sanford, one of the truly outstanding Senators. Jeff Bingaman of New Mexico, and I could go on listing a whole host of Senators that nobody in my State has ever heard of, who are the ones that really make the mare go. And once they are on the cutting edge for 3 or 4 years it becomes trendy, of course, that is when the show horses move in and take over the issue.

I do not have any real objection to that, because that is the way it works and nobody is ever going to change it. But in the final analysis, the only time anything happens around here is when the people get upset.

I have discussed Bosnia—and this is not secret. I do not go around talking about my conversations with the President. I thoroughly enjoy having a close friend in the White House, though. I have been over there in the last 2 weeks more than I was there the last 12 years. And, you know, to be able to pick up the phone and call the President and get your phone call returned, that is heady stuff, and I like it.

But—well, I guess I had better not start now talking about my conversations with the President. Except to say it is good to be able to make cases, like on the mining law reform, to a person who shares your abhorrence and shock at something that has been going on for so many years.

I remember one time Prime Time Live—we are off the subject now—did a segment on my efforts at reforming the mining laws.

And a lot of Senator's phones began to ring off the wall. One Senator called our office the next day and said, "My God, put me in as a cosponsor. My phone is ringing off the wall." When I brought the bill up 2 months later, he voted against it. He will remain nameless.

I want to thank both of you for your testimony. You have simply fortified for me all the things that I believed. But to go back to before I started that little soliloquy, you cannot believe that Members of the Senate could seriously entertain this provision in S. 4. Yet, I know the way things work around here is a very dangerous thing, and the President obviously does not want to get involved in a turf fight.

There should be no turf fight. We should not be involved in this. It is a waste of my time, it is a waste of your time, dealing with something that should never have been required in the first place.

So we will go over there and we will use the charts and we will show Intel and Cray Research and all the rest of it and hope everybody will be favorably impressed by it. But you do not have any assurance of that. But how we can sit here and set up another bureaucracy to do exactly what SBICs have done with very laudable success is one of the things that is maddening about this place.

Well, I guess that was essentially it. One of the things, though, that we will emphasize in the debate, and that is the cost of the job. I hate the supercollider and the space station not because they are not worthy and meritorious, but because they consume so much of our resources. The space station does not even have a mission.

It reminds me of the B-2 bomber. Every time we got in trouble they changed the mission. Now, it is a conventional bomber. You know, we could have built a conventional bomber for \$500 million a copy less than that bomber cost. But we spend billions, like we are spending on the supercollider, which in my opinion is just as dead as a dodo bird, it will never be finished.

The space station does not have a mission. Les Aspin has proclaimed SDI dead. Unhappily, that is \$35 billion late.

We just go ahead and put money into these programs year after year. Everybody knows at the belt buckle level we are going to terminate them because they are not meritorious. They cannot sustain themselves. And here, we are doing precisely the worst thing we could do, setting up another bureaucracy to do exactly what somebody is doing and doing well.

If the SBIC were not fulfilling this need it would be one thing. But when you take what the SBIC is doing, and hopefully the Bumpers capital gains bill, we are doing exactly what we ought to be doing. We are forcing those guys who deliver those accolades to small business to belly up and put their money where their mouth is.

Thank you all very much for coming this morning. I think this is an excellent hearing record and it will be of immeasurable help to Senator Pressler and me when we go to the floor with this.

Incidentally, I want to say one other thing. Mr. Bowles was talking about negotiating with Ron Brown. I do not mind telling you, there is nothing to negotiate, as far as I am concerned.

Thank you all for coming.

[Whereupon, at 12:52 p.m., the hearing was adjourned.]

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

U.S. SMALL BUSINESS ADMINISTRATION,
WASHINGTON, DC 20416,
July 16, 1993.

Honorable DALE BUMPERS,
Chairman, Committee on Small Business,
U.S. Senate,
Washington, DC 20510.

DEAR MR. CHAIRMAN. This is in response to your letter of June 15 in which you enclosed additional questions from Senator Pressler in conjunction with your Committee's June 9 hearing on SBA's support for technology development.

I am happy to provide the enclosed responses.

Again, I want to thank you for holding an excellent hearing on a subject which I believe is of critical importance as we strive to revitalize the American economy.

Sincerely,

ERSKINE BOWLES,
Administrator.

QUESTIONS FOR ERSKINE BOWLES FROM SENATOR LARRY PRESSLER REGARDING THE
SBIC PROGRAM

Question 1. Medium and large-sized companies that have more than one product line usually are able to find venture financing for a new idea if it is marketable. However, many small, or start-up companies with good ideas often are locked out of traditional venture capital financing simply because of their size. In your opinion, and from your many years of experience in financing small companies, at what size does this dynamic usually become a problem?

Answer. This is a very difficult question to answer. For a definitive answer, extensive research would need to be performed and information would need to be obtained from various commercial banks, investment banks and venture firms.

The ability to raise funds to develop and market new ideas, whether from banks or securities markets, depends less on the size of the company and much more on the perceived risk of the investment and the related potential return expectations. As an example, companies with almost no assets but a great idea and an experienced management team have been able to access the public securities markets based on the perceived strength of "their story" and the potential return.

In general, however, start-up technology ventures with no operating history are perceived to be far too risky for banks to finance. These companies generally must turn to the venture capital industry for their financing. The more capital intensive the industry, the greater the need for funds from the venture capitalist. Unfortunately, over the last 5 years the annual amount of venture capital being formed in the United States decreased from \$4 billion to \$1 billion. Industry sources believe there was some increase in venture capital formation in 1992, however, we do not know how much of these funds are flowing into small business.

Our hope is that the restructured SBIC Program will help to dramatically reverse this downward trend in the funds flowing to the venture capital industry for investment in growth-oriented small companies.

Question 2. Could you discuss the differences—in terms of cost and risk to the government—between guaranteed government loans, direct government loans, and preferred participating securities?

Answer. Generally, guaranteed government loans should be less costly to the government than direct government loans. This assumes that cost includes both program and administrative cost.

While participating securities are equity securities and not loans; they will be considered guarantee loans for purposes of this discussion.

Under a guaranteed loan program, the government provides a guarantee to a financial intermediary to induce the intermediary to provide assistance to the intended recipient. Under the 7(a) Program, SBA guarantees a portion of an individual loan made by a bank or an approved non-bank lender to a small business concern. However, under the SBIC Program, SBA guarantees 100 percent of an SBICs debenture which is pooled and pass through certificates are sold in the public markets to raise funds which the SBIC then lends to a small business concern.

Since the loan making and servicing responsibility belongs to the intermediary, there should be less administrative cost to the government. Also, a guaranteed loan

does not involve an outlay of government funds unless the government is required to honor its guarantee.

Under a direct loan program, the government provides the financial assistance directly, which involves loan making and servicing responsibilities on the part of the government. It also involves an immediate outlay of 100 percent of the amount of the loan. Under the SBIC Program, the direct funding activity is primarily focused on the purchase of preferred stock from Specialized SBICs, which is not a loan activity.

Under credit reform, the cost of a program is measured in terms of its subsidy rate. This rate does not include administrative costs associated with a program. Generally, a direct program will have a higher subsidy rate than a guarantee program.

With regard to participating securities, the subsidy rate will be lower than the SBIC debentures guaranteed by SBA. This reduced cost results from the structure of the security and not whether it is a direct or guarantee obligation of the government.

Question 3. How competitive are our high-tech companies compared with those of Japan, Germany, and other foreign competitors? How are we really doing?

Answer. This is a very difficult issue that is almost impossible to quantify. There are numerous components of competitiveness, including productivity, innovation and commercialization. Statistically, American companies have led the world in recent years with regard to productivity gains. While attributes such as innovation and success at commercialization are less quantifiable, the United States certainly remains a leader in these areas, and as a result is competitive in most world markets, with the notable exception of Japan. In fact, the United States maintains a good balance of trade in high technology goods with most regions of the world except Japan.

While part of the problem in the past was due to failure by some American firms to commercialize their innovations and maintain high quality, American industry has made great strides in these areas. Much of our remaining problem in selling high technology goods to Japan is due to structural impediments in the Japanese marketplace which prevents American participation. On the other hand, the Japanese are continuing to acquire small, start-up technology firms in the United States in order to capitalize on American innovations in areas such as biotechnology. As you know, President Clinton has made the reduction of Japanese trade barriers a high priority which he is pursuing diligently on his current trip to Japan.

Question 4. How does the American venture capital industry compare to foreign venture capital industries?

Answer. Until very recently, the American venture capital industry was the world's largest, accounting for \$35 billion of the \$80 billion worldwide venture pool. During 1991, however, the United States was surpassed by the European venture capital industry where investments were three times higher than the U.S. level. Competitive pressures also continued from the Japanese industry, the third largest worldwide, although evidence of retrenchment by Japanese venture capitalists appeared during 1992. Overall, the dramatic growth over the past decade of foreign venture funds, which were virtually nonexistent before 1980, has blurred geographic boundaries both for sources and uses of funds, making the venture capital industry an international enterprise. This assessment is based on *Venture Capital at the Crossroads* (Bygrave & Timmons) and various issues of the *Venture Capital Journal* which document these trends and developments by country.

While the structure of the venture capital industry varies by nation, there are key distinctions in the characteristics of the American venture capital industry. The U.S. industry consists largely of private, independent firms that have increasingly focused on expansion financings (44 percent of dollars invested in 1986-89) and de-emphasized traditional venture investments in start-up and early-stage financings (29 percent in 1986-89). By the late 1980s, the largest group of American investments was in medical and health-care related ventures, followed by communications, consumer products, computer hardware and systems, and electronics.

By contrast, foreign venture capital industries generally have greater numbers of corporate and government-related venture-capital firms that focus on investing in established, profitable companies and management buy-outs and buy-ins. For example, banks and financial institutions supplied most European capital, with 84 percent of European investments during 1986-89 going to LBOs, acquisitions, and expansions. Investments by industry also are very different from the American pattern. Almost 80 percent of European investments in 1989 were in industrial products, consumer products and other industries.

The shift in American investment strategies is a result of the influx of institutional investors into the U.S. venture capital industry. During the 1980s, pension funds became the primary source of American venture capital funds, accounting for 46 percent of total capital by 1988, while corporations, endowments, foundations, and insurance companies contributed an additional 32 percent of the funds. These sources replaced wealthy families and individuals who historically had been the primary suppliers of funds. The increased importance of institutional investors shifted investments from traditional "patient capital" ventures into more liquid, shorter-term financings.

NORWEST VENTURE CAPITAL MANAGEMENT, INC.,
222 South Ninth Street, Minneapolis, MN 5502-3388,
June 7, 1993.

Honorable DALE BUMPERS,
Chairman, Committee on Small Business,
U.S. Senate,
SR-428A Russell Senate Office Building,
Washington, DC 20510-6350.

Dear SENATOR BUMPERS. I am a partner of Norwest Venture Capital, one of the largest Small Business Investment Companies in the United States.

It has come to my attention that legislation is being considered by the Senate (S. 4) that would establish a new government sponsored private investment program, administered by the Commerce Department, to help stimulate investment in high technology industries. The notion of an investment program to support high technology is laudable, since it is well understood that high technology businesses advance the productivity of the nation and provide high paying jobs to its employees. However, a new government program is not needed because it already has a high technology investment program, the Small Business Investment Company (SBIC) program under the Small Business Administration. The purpose of my comments to the Committee is to demonstrate that the SBIC program, through participants such as Norwest Venture Capital, has been effective in stimulating investment in high technology for over 30 years.

Norwest Venture Capital was founded in Minneapolis, MN in 1961 with \$2.0 million in capital as a new licensee in the SBIC program. Since then, Norwest has invested over \$300 million in over 250 businesses. Today it manages 3 SBICs and has offices in Boston, MA and Menlo Park, CA in addition to its headquarters in Minneapolis. The investment focus of Norwest over the years has been heavily weighted toward high technology businesses. Over two-thirds of our investment dollars have been invested in companies in the computer hardware, computer software, medical products and services, environmental, telecommunications and space exploration and other high technology industries. Most of these investments were at very early stages in the companies' histories and were crucial to the companies' survival and development. Several brief examples follow:

National Computer Systems, Minneapolis, MN.—Initial investment in 1965. This company provides computer-based products used primarily in educational related applications. It had revenues in excess of \$300 million in 1992 and employs over 3,000 people.

Gray Research, Inc., Minneapolis, MN.—Initial investment in 1972. This company is a legend in the computer industry and is the dominant manufacturer of supercomputers in the world. With revenues of over \$797 million in 1992, Cray employs over 5,400 people.

Network Systems Corporation, Minneapolis, MN.—Initial investment in 1974. NSC was a start-up company in 1974 developing computer networking products. The company had 1992 revenues of \$219 million and employs over 1,350 people.

MGI Pharma, Minneapolis, MN.—Initial investment in 1980. Norwest financed the start-up of this biotechnology company founded by two scientists from the University of Minnesota. Today it is a successful publicly-held company.

Pacific Nuclear Systems, Inc., Seattle, WA.—Initial investment 1983. This company provides products and services to ensure the proper handling of nuclear waste. Pacific Nuclear is publicly-held, had 1992 revenues of \$69 million, and employs 475 people.

Orbital Sciences Corporation, Vienna, VA.—Initial investment in 1983. OSC produces special purpose rockets used in launching satellites and provides related services. It recognized very early the opportunities in the private sector for

space exploration. Orbital is a publicly-held company with 1992 revenues of \$174 million and employs over 1,165 people.

Curative Technologies, Setauket, NY.—Initial investment in 1986. The company's product is a topical dressing formed from a patient's own blood that can treat chronic, non-healing wounds. It is based on a technology from the University of Minnesota. Today CTI operates over 40 wound healing centers using its product. The company had revenues in 1992 of \$22 million and employs 197 people.

PeopleSoft, Inc., Walnut Creek, CA.—Initial investment in 1990. This company provides sophisticated computer software that allows human resource departments to function much more efficiently. PeopleSoft had revenues in 1992 of \$31.5 million and employs approximately 188 people.

This should give you a sense of the types of technology-based businesses in which Norwest invests and some of the benefits to the economy and society from successful technology business development.

You should also be aware that the Equity Enhancement Act of 1992 will strengthen the SBIC industry and in particular the new form of funding will make the program more conducive to early stage technology business investment.

It seems obvious to me that any additional measures to stimulate technology investment should be done within the SBIC program. Efforts to create a separate technology investment vehicle would be duplicative and counterproductive.

Respectfully yours,

JOHN P. WHALEY,
Partner.

COMPANY Description	Number of Employees When SBIC Invested	After Tax Profits (000s) When SBIC Invested	Cum. Federal Taxes Paid (000s)
APPLE COMPUTER, INC. Manufactures microprocessor-based personal computer systems	63 14,500	42 454,033	1,232,010
ATLANTIC RESEARCH CORP. Produces computer and data analysis systems for propulsion industries	870 4,100	359 20,000	30,000
BIO MAGNETIC TECHNOLOGIES, INC. Developer of medical instruments used to monitor magnetic fields within the human body	61 121	(466) N/A	N/A
BIPOLAR INTEGRATED TECHNOLOGY Develops and manufactures high-speed bipolar computer chips	40 100	0 3,000	N/A
COMPAC COMPUTER CORP. Manufactures portable and desktop IBM-compatible computers	155 9,700	(4,549) 430,000	588,600
COMPEK RESEARCH, INC. Provides computer systems and services and manufactures electronic components for defense-related industries	45 700	(53) 600	N/A
CRAY RESEARCH, INC. Manufactures supercomputers and mainframes	12 4,708	(3) 89,045	445,410
HUTCHINSON TECHNOLOGY, INC. Manufactures computer peripherals and supplies suspension assemblies for rigid disk drives	328 1,513	1,165 2,710	N/A
INTEL CORP. Leading manufacturer of integrated circuits	218 21,700	(1,888) 391,021	787,260
LANDMARK GRAPHICS, INC. Develops systems to interpret seismic data for energy related industries	16 500	(610) 5,833	8,072

COMPANY Description	Number of Employees When SBIC Invested	After Tax Profits (000's) When SBIC Invested	Cum. Federal Taxes Paid (000's)
MEASUREMENT SPECIALTIES, INC. Develops micro-chip technology for digital weight, temperature, pressure and distance measuring devices	22 98	1,990 (786) 2,500	N/A
NETWORK SYSTEMS CORP. Manufactures high-performance data communications products for computer networks	35 1,090	(636) 17,327	59,990
OPTICAL DATA SYSTEMS, INC. Develops fiber optic modems and multiplexers	2 60	0 0	2,129
ORBITAL SCIENCES CORP. Produces special purpose rockets used in launching satellites	20 1,165	N/A N/A	N/A
PACIFIC NUCLEAR SYSTEMS, INC. Provides products and services to ensure the proper handling of nuclear waste	5 475	N/A N/A	N/A
PHOTOMETRICS, LTD. Manufactures high resolution digital image processing systems	45 91	(52) 8,653	0
SYMBOL TECHNOLOGIES, INC. Designs and manufactures laser bar-code identification equipment	4 1,800	0 18,968	30,100
	1,941 62,421	(7,479) 1,445,819	3,181,442

BENEFITS PRODUCED BY THE SBIC PROGRAM

COMPANY	YEAR INVESTED	NUMBER OF EMPLOYEES When SBIC Invested	1990	SALES (000's)		AFTER TAX PROFITS (000's)		CUM. FEDERAL TAXES PAID (000's)
				When SBIC Invested	When SBIC Invested	When SBIC Invested	1990	
ACTION AUTO RENTAL INC.	1984	4	1,199	\$ 456	\$ 98,466	\$ (8)	\$ 5,572	\$ 9,796
APPLE COMPUTER INC.	1977	63	14,500	773	5,284,013	42	454,033	1,232,010
BEAUTICONTROL COSMETICS	1986	131	300	9,524	52,786	1,364	6,060	10,927
CALLAWAY GOLF CO.	1985	29	200	1,974	20,500	(1,009)	2,450	621
COMPAC COMPUTER CORP.	1983	155	9,700	257	3,600,000	(4,549)	430,000	588,800
COSTCO WHOLESALE INC.	1983	5	9,500	0	4,132,600	0	49,200	45,000
CRAY RESEARCH INC.	1972	12	4,708	58	784,700	(3)	89,045	445,410
ENCLINE INC.	1985	53	1,177	1,700	52,669	(273)	2,097	2,168
FEDERAL EXPRESS CORP.	1973	518	64,700	6,769	7,015,069	(4,460)	115,764	748,360
FILENET CORP.	1982	25	653	\$112	83,100	(262)	2,990	5,000
INTEL CORP.	1969	218	21,700	565	3,126,833	(1,887)	391,021	781,260
LANDMARK GRAPHICS INC.	1984	16	500	31	56,707	(609)	5,833	8,072
MICROTEK MEDICAL INC.	1984	100	267	2,438	15,270	637	767	1,417
NETWORK SYSTEMS CORP.	1976	35	1,090	3	14,4789	(638)	17,327	59,990
PAGING NETWORK INC.	1981	212	1,260	16,000	107,000	(2,800)	(13,604)	1,000
PRO-NET INC.	1983	7	225	125	15,000	(175)	400	350
RAILTEX INC.	1980	7	200	700	21,500	(17)	1,500	3,700
RAMSAY HEALTH CARE	1983	1	2,071	0	116,000	0	5,800	10,000
SHOREWOOD PACKAGING CORP.	1985	430	750	43,360	127,136	3,049	15,000	22,304
STAPLES, INC.	1986	44	1,700	79	310,000	(893)	5,500	6,200
SYMBOL TECHNOLOGIES INC.	1976	4	1,800	0	222,346	0	18,968	30,100
TELEPHONE ELECTRONICS	1977	105	650	2,787	66,453	400	1,222	6,655
THE WHOLESALE CLUB	1984	159	2,782	11,600	569,665	(1,136)	6,148	1,720
UNIVERSAL HEALTH SERVICES	1979	140	10,200	20	587,000	(40)	9,000	7,500
VERTEX COMMUNICATIONS	1985	175	375	16,217	37,502	(464)	1,945	2,855
	2,648	152,207	\$ 115,548	\$ 266,647,104	(\$ 13,731)	\$ 1,651,246		\$4,037,015

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